SHOUT
SHARE
IT

FOR THE PEOPLE
FOR EDVCATION
FOR SCIENCE

LIBRARY
OF
THE AMERICAN MUSEUM
OF
NATURAL HISTORY

Bound at
A.M.N.H.
1922

59.82:06(77.1)
cv

THE
WILSON BULLETIN
NO. 110
A QUARTERLY JOURNAL OF ORNITHOLOGY
22.90078 Du
VOL. XXXII MARCH, 1920 NO. 1
OLD SERIES VOL. XXXII. NEW SERIES VOL. XXVII.

THE RAPTORES OF NELSON COUNTY, KENTUCKY

BEN J. BLINCOE

The following is a brief account of the birds of prey of Nelson county, Kentucky. Nelson county is situated in the central part of the state and today is largely under a high state of cultivation. Timber is growing scarcer each year. So little has been published on the birds of this state that some information on the hawks and owls of this locality might be of use to those interested in the bird-life of this region. The list comprises eighteen species but only eight or nine of these can be called common. They have been observed mainly in the country within two or three miles of Bardstown, which is the county-seat. No doubt a series of observations in some of the wilder parts of the county would reveal a fuller knowledge of several of the species listed and perhaps would add a species or two to the list.

In 1885 Mr. Charles W. Beckham published a list of birds of Nelson county. His valuable list as he himself remarks is very incomplete in regard to the birds of prey, being unable to secure specimens for identification. It has been my good fortune to examine in hand specimens of every species listed with the exception of the Black Vulture and the Great Horned Owl. The former is readily identified in life by its form, manner of flight, etc., and the latter was noted by Mr. Beckham. So far as I am able to find in the few publications dealing with Kentucky birds of prey, there are but two species other than the ones

listed here, that have been observed in the state. These are the Pigeon Hawk and Swallow-tailed Kite (Prof. H. Garman, Vertebrate Animals of Kentucky).

Here as elsewhere the birds of prey, especially the hawks, are severely persecuted by farmer and sportsman and it is almost useless to try to uproot the ill-feeling toward all hawk-kind. The larger owls are generally looked upon as chicken thieves and are killed for that reason. The little screech owl is usually allowed to pursue its career unmolested but there are those who contend that it should be destroyed.

It is with the confidence that this list will be of interest to those interested in the hawks and owls of Kentucky that it is presented for publication.

1. *Cathartes aura septentrionalis*—Turkey Vulture.

A common resident, but is often scarce in winter. Not so abundant as a few years ago. Within the last four or five years much complaint has been made about the buzzards spreading various live-stock diseases.

2. *Catharista urubu*—Black Vulture.

A rather uncommon resident. Mr. Beckham found it only as a summer resident. I have observed it in every month of the year and very often in winter. Usually seen in threes or fours and seldom associates with the common species. It is occasionally attacked by crows in the same manner as some of the larger hawks.

3. *Circus hudsonius*—Marsh Hawk.

A fairly common migrant, especially in the fall. Occasionally seen in mid-winter. Most often observed late in the afternoon skimming low over the fields, at which times it is readily identified by its peculiar flight and white rump. On dissecting one of these birds its stomach was found to contain the remains of a mouse. The large appearance of this bird has led many country folk to consider it as a great enemy to poultry. Mr. Beckham did not observe it here.

4. *Accipiter velox*—Sharp-shinned Hawk.

A fairly common resident. Found breeding in a small beech-wood about two miles southeast of Bardstown. It is more numerous in the fall, at which times it is very destructive to song birds. Have several times seen it chase English sparrows, and it occasionally visits the outskirts of Bardstown, likely in search of these pests.

5. *Accipiter cooperi*—Cooper's Hawk.

Resident. Not as common and never as abundant as velox. Found nesting in 1917. The worst hawk enemy of poultry. On one occasion I saw this hawk dash into a small flock of English sparrows and capture one before they could fly from the tree. Was observed by Mr. Beckham.

6. *Accipiter atricapillas atricapillas*—Goshawk.

A rare winter visitor. A fine mature specimen of this hawk was taken near Bardstown on December 1, 1917. Its occurrence here at that time seemed to be a forwarning of the severe winter weather that prevailed for many weeks. Was not observed by Mr. Beckham, but was observed in the state by Audubon.

7. *Buteo borealis borealis*—Red-tailed Hawk.

Resident. Rather rare breeder. Fairly common in fall and winter. For several years a pair of these birds nested in the woods along the bluffs bordering the Beechfork river, about three miles southeast of Bardstown. This is the hawk that is generally supposed to be the worst "chicken hawk." I have trapped it by placing a steel trap near the carcass of a hen. It is just such carrion that the redtail seeks in cold weather. Mr. Beckham does not mention it.

8. *Buteo lineatus lineatus*—Red-shouldered Hawk.

Resident. Have never found its nest, but feel sure it breeds, having observed it at all seasons of the year. Observed one chasing a rabbit in the month of August. Mr. Beckham found it breeding and stated that it was probably the most common hawk found here.

9. *Haliaetus leucocephalus leucocephalus*—Bald Eagle.

A rare visitor. An immature specimen was taken about ten years ago near Nazareth Academy. Mr. Beckham mentions one taken near Boston in the county.

10. *Falco sparverius sparverius*—Sparrow Hawk.

Resident. Our most common hawk. It is not uncommon about the outskirts of Bardstown, but is more often observed in the farming districts. A telephone pole is its favorite lookout point. Often observed about the cornshocks, at gathering time, in search of mice. In severe weather it often takes shelter in outbildings.

11. *Pandion haliaetus carolinensis*—Osprey.

A migrant. Have observed two specimens. One taken on May 25, 1917, the other October 18, 1919. Mr. Beckham mentions an osprey taken in April, 1882.

12. *Aluco pratincola*—Barn Owl.

This owl occurs rarely and I have been informed of its breeding near Bloomfield, in the county. It is not generally known in

this locality, but occasionally I hear mention of a "monkey-faced" owl. One of these birds, taken in August, 1914, had last fed on several large night-flying beetles. Mr. Beckham makes note of a specimen taken in an adjoining county.

13. *Asio wilsonianus*—Long-eared Owl.

Have two records: February 16, 1914, specimen collected; March 7, 1917, specimen observed. They were both located in the same cedar thicket about two miles southeast of Bardstown. On examination of the stomach of the bird collected it was found to contain the remains of a cardinal and a small native sparrow. At its roost was found the remains of birds and mice. This owl was not observed by Mr. Beckham.

14. *Asio flammeus*—Short-eared Owl.

Two specimens: November 15, 1915, and another specimen about ten days later. Both had fed on mice and nothing else. Mr. Beckham states that one was taken here in November, 1881.

15. *Strix varia varia*—Barred Owl.

This seems to be a rather uncommon owl locally. It was not observed by Mr. Beckham. I have observed it twice, March 7, 1915, and November 22, 1919. The first specimen was likely a breeding bird.

16. *Otus asio asio*—Screech Owl.

A common resident. The most common owl, and with the exception of the turkey vulture, is likely the most abundant and raptorial in this locality. In July the young are frequently seen huddled together in shaded thickets. Common in Bardstown as well as in the surrounding country.

17. *Bubo virginianus virginianus*—Great Horned Owl.

Mr. Beckham states that this is "a rather common summer resident." I have never seen a specimen of this owl, but from the various accounts of hunters and farmers I feel that perhaps a few of them still inhabit some of the more wooded districts of the county.

18. *Nyctea nyctea*—Snowy Owl.

This arctic species has occurred here at least three times. Alexander Wilson observed a few specimens near Bardstown about the year 1810. Mr. Beckham mentions a specimen taken in the 70s or 80s. I had occasion to observe a fine, nearly white, specimen taken about fifteen years ago.

December 21, 1919.

NOTES ON BIRDS OF WAKULLA COUNTY, FLORIDA

JOHN WILLIAMS, ST. MARKS, FLA.

(Continued from December, 1919, Wilson Bulletin)

68. *Philohela minor*—Woodcock.

I have no breeding records, July, 1918, being the earliest date noted. During the winter of 1915-16 it was with us more abundantly than usual.

69. *Gallingo delicata*—Wilson's Snipe.

A regular winter visitor and at times found in considerable numbers on the open marshes and borders of bayous and streams. The bulk of the vernal flight usually occurs in early April. October 7, 1915, May 9, 1916, September 12, 1917.

70. *Macrorhamphus griseus griseus*—Dowitcher.

At times abundant and usually to be found during the winter, along shore, in considerable numbers on bars and sand-flats. This as well as the following species assumes the breeding plumage while here. September 22, 1917, June 6, 1915.

71. *Macrorhamphus griseus scolopaceous*—Long-billed Dowitcher.

Associates with the preceding and other littorals during the winter. April 27, 1918, I found them quite numerous.

72. *Tringa canutus*—Knot.

I have only identified it here casually, but may have failed to recognize it at other times. February 10, 1915, October 9, 1916, May 22, 1913.

73. *Pisobia maculata*—Pectoral Sandpiper.

Seemingly not abundant. September 24, 1913.

74. *Pisobia minutilla*—Least Sandpiper.

Occur along shore in flocks of one hundred or more, resorting to the bars at low water and back on the sand flats as the bars become covered. Not infrequently found singly or in small groups at the border of a pond or stream at some distance from the Bay. August 9, 1917, May 28, 1916.

75. *Pelidna alpina sakhalina*—Red-backed Sandpiper.

One of our abundant littorals during the winter. The summer plumage is assumed here before their flight northward. August 9, 1917, May 26, 1919.

76. *Ereunetes pusillus*—Semipalmated Sandpiper.

Dense flocks of the "Peeps" turn, wheel and glisten over the sand flats and marshes as they come in from the bars or take flight on alarm. After a few times they settle down close to some bunch of larger kindred or run along in the shallow pools gleaning in dustriously. August 9, 1917, June 11, 1919.

77. *Ereunetes mauri*—Western Sandpiper.

Probably a common winter resident, but as I had failed to recognize it until recently it has not been separated from *E. pusillus*. June 11, 1919.

78. *Calidris leucophæa*—Sanderling.

I have not found it numerous on our coast in winter. May 22, 1912.

79. *Totanus melanoleucus*—Greater Yellow-legs.

Winter resident. Usually found in small bunches only and generally with allied species. October 16, 1915, April 11, 1915.

80. *Totanus flavipes*—Yellow-legs.

Winter resident. Decidedly more numerous than the preceding. September 20, 1915, April 21, 1917.

81. *Helodromas solitarius solitarius*—Solitary Sandpiper.

Migrant. Found generally about inland streams, ponds and pools rather than along shore. They are absent but for a brief period during the breeding season. July 28, 1916, August 7, 1917, May 11, 1917, October 12, 1915.

82. *Catoptrophorus semipalmatus semipalmatus*—Willet.

We have but few places adapted to the requirements of the Willet for nesting, but where they prevail these birds are found each year and seem to maintain their numbers without much if any increase. They are loud, vehement and audacious in protesting an intruder, timidity seemingly no part of their character. May 21, 1913. Young but two or three days old. March 15, 1915. They depart southward in October.

83. *Catoptrophorus semipalmatus inornatus*—Western Willet.

Mr. Ludlow Griscom records two at East Goose Creek on December 29, 1015. Bird-Lore, January-February, 1916. R. W. Williams, Esq., noted four at the same locality between November 16 and 24, 1917. They are probably casual or regular winter visitors.

84. *Bartramia longicauda*—Upland Plover.

Migrant. While not found with us in abundance a few resort to our more open marshes and low grounds annually. I have no fall records. March 23, 1914, May 6, 1915.

85. *Actitis macularia*—Spotted Sandpiper.

A regular summer dweller, frequenting river shores, ponds and the coast as well. Usually but three or four are seen together, but at times twenty-five to thirty or more may associate. I have no winter records.

86. *Numenius hudsonicus*—Hudsonian Curlew.

Probably occurs regularly as a migrant in small numbers. September 24, 1917, May 19, 1919.

87. *Squatarola squatarola*—Black-bellied Plover.

Winter resident. They seem quite irregular as to their appearance and abundance. January 30, 1914, eight or ten seen, April 11, 1915, forty to fifty in a flock with other species. September 22, 1917, earliest date for arrival. Some individuals assume breeding plumage here. May 26, 1919, three seen.

88. *Oxyechus vociferus*—Killdeer.

Quite generally distributed and frequently to be seen from fall until spring. October 5, 1916, April 6, 1915.

99. *Aegialitis semipalmata*—Semipalmated Plover.

I have only seen it in small numbers. September 30, 1917, May 7, 1917. I have no winter records.

90. *Ochthodromus wilsonius*—Wilson's Plover.

Summer resident. With us it frequents the same localities with the Willets, but nesting on the bare shell ridges. Extremely solicitous for the safety of their young. Several pairs are found nesting as a colony. April 26, fresh eggs.

91. *Arenaria interpres morinella*—Ruddy Turnstone.

Migrant. A few to be found each season along shore. I have never found them numerous nor other than in small bunches. Not generally associated with other species. September 12, 1913, June 5, 1913. I have not found it here in winter. Mr. Ludlow Griscom saw four at East Goose Creek, in this county, December 29, 1915. Bird-Lore, January-February, 1916.

92. *Hæmatopus palliatus*—Oyster-catcher.

This striking bird is no longer common on our shores. In fact the oldest fishermen only know it as of rare occurrence formerly. One was seen in the late summer of 1913.

93. *Colinus virginianus virginianus*—Bob-white.

Despite pump guns and automatics this vigorous all-round sport manages to hold his own here when weather conditions are favorable for the very young birds. Eggs are deposited about the middle of May. While our bird is smaller than specimens taken farther north they are not referred to the *C. V. floridanus* form.

94. *Meleagris gallopavo silvestris*—Wild Turkey.

Were I to tell of the actual abundance of this species in our county I doubt if the facts would be credited. With good dry weather in May and early June, while the chicks are tender, we are sure to have excellent turkey hunting during the succeeding season.

95. *Ectopistes migratorius*—Passenger Pigeon.

Within the memory of several of our older inhabitants these birds occurred in great numbers at regular intervals.

96. *Zenaidura macroura carolinensis*—Mourning Dove.

Doves are with us in but limited numbers during the nesting

season, but as the weather gets cooler they come in flocks and glean from the fields and forests.

97. *Chæmepelia passerina passerina*—Ground Dove.

Perhaps much of our country is too low for the comfort of this dainty little Dove. At any rate, for some reason we do not have them nearly so abundant as they are found farther inland and much farther north. Local name, "Mourning Dove."

98. *Cathartes aura septentrionalis*—Turkey Vulture.

Despite needless prejudice against this bird even a casual observer must admire his wonderful power of flight, and but for their habits of feeding we of the South at least might often suffer for the lack of their good offices. Such prejudice holders are to be classed with the killers of all snakes and the shooting of many of our insectivorous birds "for sport."

99. *Catharista uruba*—Black Vulture.[1]

Of our two species of Vultures this is the rather more numerous except directly along shore, where it seldom appears. The two species do not freely associate generally either in soaring or feeding. Young are hatched early in April.

100. *Elanoides forficatus*—Swallow-tailed Kite.

A few of these beautiful birds are to be seen every season and one or two pairs usually nest in our neighborhood. April 14, 1918, one seen carrying nesting material. Local name, "Forked-tail Fishing Hawk."

101. *Ictinia mississippiensis*—Mississippi Kite.

Of regular occurrence as a breeding species, but never numerous except at the time of spring migration, when sometimes eight or ten may be associated. They are vigorous and graceful in flight.

102. *Circus hudsonius*—Marsh Hawk.

I have no record for the "Rabbit Hawk" in our county, but the dates might indicate such a record. They occur most plentifully in the cooler seasons. April 8, 1918, May 3, 1914, March 14, 1916, September 14, 1915.

103. *Accipiter velox*—Sharp-shinned Hawk.

The "Blue Darter" is a terror to our Quail and small birds generally and is a well known resident bird of the whole district under consideration.

104. *Accipiter cooperi*—Cooper's Hawk.

Probably somewhat less numerous here than the Sharp-shinned Hawk. Their habits and distribution are similar.

105. *Buteo borealis borealis*—Red-tailed Hawk.

Resident. The "Big Chicken Hawk" (misnomer) is but sparingly distributed throughout the county. Unfortunately their cog-

[1]See A Vulture Census and Some Notes, Wilson Bulletin, Sept. 1908.

nomen has created prejudice and too frequently they are destroyed without cause or reason.

106. *Buteo lineatus alleni*—Florida Red-shouldered Hawk.

Resident. Found on our marshes and in the vicinity of branches and ponds. They subsist largely on rabbits, snakes, frogs and rats. Local name, "Chicken Hawk." March 9, 1914, nest with fresh eggs.

107. *Buteo platypterus*—Broad-winged Hawk.

Resident. While not so nearly abundant as either of the "Chicken Hawks" a few of these quiet-mannered birds may be seen each year. June 14, 1913, old bird carrying food.

108. *Buteo brachyurus*—Short-tailed Hawk.

The record by Mr. C. J. Pennock, of a nest with one egg, from this county, remains our complete history as far as I know.

109. *Haliætus leucocephalus leucocephalus*—Bald Eagle.

Several pairs of Eagles nest within the limits of our county. February 7, 1914, a nest contained young apparently but a few days old. January 24, 1915, another nest had two young almost fully fledged. December 11, 1916, nest with two eggs nearly hatched.

110. *Falco peregrinus anatum*—Duck Hawk.

No doubt a few of these bold marauders occur along shore each winter. The fishermen and Duck hunters tell of a swift flying Hawk that overtakes flying Ducks. I noted one October 9, 1916.

111. *Falco columbarius columbarius*—Pigeon Hawk.

I have not recognized it in the county. R. W. Williams, Esq., noted it at East Goose Creek November 16-24, 1917 (Auk, Jan. 1919).

112. *Falco sparverius sparverius*—Sparrow Hawk.

I had supposed all our Sparrow Hawks to be of this form, but with the recognition of *F. s. paulus* here I can only surmise, for the present at least, that *F. s. sparverius* is a common winter resident.

113. *Falco sparverius paulus*—Little Sparrow Hawk.

Dr. Oberholser has identified a breeding bird from St. Marks as of this species.

114. *Pandion haliaëtus carolinensis*—Osprey.

During the most of November and in December and January these birds almost entirely absent themselves from our district. For the remainder of the year they are widely distributed and nest near the coast, back in the timbered swamps and at the border of ponds far inland. With us they usually select a large tall tree for a nesting site. February 6, 1919, November 2, 1917.

115. *Aluco pratincola*—Barn Owl.

They doubtless are with us regularly throughout the year as

I frequently hear of *white* Owls being seen, but I have met with them but rarely.

116. *Asio flammeus*—Short-eared Owl.

Crows pestering one on a river marsh December 5, 1913, constitutes my only record.

117. *Strix varia alleni*—Florida Barred Owl.

Resident. Numerous wherever the timber is fairly heavy, and particularly along river bottoms. Fiddler crabs seem to be a favorite food for them.

118. *Otus asio floridanus*—Florida Screech Owl.

Resident. They become more numerous a few miles back from the coast. About Wakulla and Medart I have found them more abundant than at St. Marks.

119. *Bubo virginianus virginianus*—Great Horned Owl.

Resident. Not nearly so abundant about St. Marks as is the Florida Barred Owl. The reverse is said to be the case a few miles back from the coast and larger rivers.

120. *Conuropis carolinensis*—Carolina Paroquet.

It has been many years since this bird has been seen in our county. The older citizens recall its occurrence. Major Bendire, in his magnificent work. Vol. II, p. 5, records their having nested abundantly here.

121. *Coccyzus americanus americanus*—Yellow-billed Cuckoo.

Frequents the more open country and thickets about ponds and streams. April 12, 1914, May 2, 1919, fresh eggs.

122. *Ceryle alcyon*—Belted Kingfisher.

Resident. Generally distributed, but in small numbers.

123. *Campephilus principalis*—Ivory-billed Woodpecker.

Mr. John Linton knew the bird as fairly common in the heavy swamps of Taylor County, Florida, prior to 1888. Following that date, for a few years after his removal to Wakulla County, he occasionally saw them in the wilder river swamps of this county.

124. *Dryobates villosus audubonì*—Southern Hairy Woodpecker.

Found sometimes in open pine woods, but more commonly in timber along rivers and streams. Resident. Common.

125. *Dryobates pubescens pubescens*—Southern Downy Woodpecker.

The smallest of our Woodpeckers, is generally distributed and quite numerous. Young just hatched May 20, 1914.

126. *Dryobates borealis*—Red-cockaded Woodpecker.

Resident. This bird is far more numerous in the higher dry pine lands back from the coast than it is in the low flat woods. In the upper parts of the county it is the most abundant Woodpecker. Nest usually, if not always, in a living tree.

127. *Sphyrapicus varius varius*—Yellow-bellied Sapsucker.

A regular but not an abundant winter visitor. October 18, 1914, March 26, 1914.

128. *Phlœotomus pileatus pileatus*—Pileated Woodpecker.

Resident. Found quite abundantly in the heavy timbered tracts in particular, along the larger streams. At times they come out into the open pine woods on long slow wing-beats in a level flight-line in marked contrast to the movements of the other members of this family. Local names, "Good God" and "Wood Cady."

127. *Melanerpes erythrocephalus*—Red-headed Woodpecker.

Resident. Close along the coast we seldom see this bird, but as soon as one reaches the higher, dry sand lands they become numerous. At St. Marks they are rare; at Wakulla, six miles inland, they are numerous.

130. *Centurus carolinus*—Red-bellied Woodpecker.

About St. Marks this is our most abundant Woodpecker. In the higher lands it gives way to the Red-head. Local name, "Cham chack."

131. *Colaptes auratus auratus*—Flicker.

A regular but not abundant resident. June 1, 1917, young in nest almost ready for flight.

132. *Colaptes auratus luteus*—Northern Flicker.

Flickers become numerous with us in September and so remain until March. The influx are probably of this form mainly. Dr. Oberholser identified specimens taken March 17, 1917, and March 10, 1919, as *C. a. luteus.*

133. *Antrostomus carolinensis*—Chuck-will's-widow.

Our "Whip-poor-will" makes himself known at nightfall very soon after his arrival from the South, but after July they are seldom heard. They frequent the low woods and in the vicinity of streams and ponds. March 27, 1914, September 24, 1915. Two fresh eggs April 16, 1914.

134. *Antrostomus vociferus vociferus*—Whip-poor-will.

Probably occur more frequently during the cooler season than might be surmised as they are silent while with us and frequent low, thickly grown woods. My records extend only from Christmas day, 1916, until February 2, 1917.

135. *Chordeiles virginianus chapmani*—Florida Nighthawk.

From early April until the nights grow cool these valuable gleaners are quite numerous with us. Flocking after the nesting season they are frequently to be seen making a regular round in search of food for an hour or more preceding dark and they are a-wing in the early morning until almost sunup. Local name, "Bull Bat." May 6, 1914, eggs nearly hatching. April 9, 1914, October 3, 1917.

136. *Chætura pelagica*—Chimney Swift.

A rather unusual summer visitor about St. Marks. Farther inland more numerous, but I have not found it abundant at any place in our county. Local name, "Bat" and "Chimney Bat." March 31, 1915, September 17, 1914, October 22, 1917.

137. *Archilocus colubris*—Ruby-throated Hummingbird.

While never occurring in numbers we have this dainty sprite regularly during the warmer months. April 3, 1915, October 8, 1915.

BLUEBIRD MIGRATIONS — 1917.

BY HOWARD CLARK BROWN

On March thirteenth, 1917, there appeared in the Charles City Daily Press of Charles City, Iowa, a notice that the Califor Naturalist Club of that city had established a bird bureau. The notice read that the Naturalist club, in order that it might know when the various spring birds arrived that year, had established a bird bureau to which all information concerning birds might be reported. It was felt that if all observers would only report their observations to a single compiling bureau much might be accomplished in learning the routes of migration and the time of first arrivals, etc., which would else be lost. The plan had been adopted because each year the club had felt the need for some sort of concentration of just such material as came to them from varied sources at all manner of inconvenient times. And thus it happened that two members of the organization took it upon themselves to keep the records for the community. The telephone numbers of these two members were published in the daily paper and all sorts of birds notes were asked for. The result was astonishing. It was found that the responses from every side were unusually eager. Since that date of establishment of the bureau, each year has seen an added interest in its work, and each year has added new observers. Hundreds of bird notes have been reported to the bureau. As yet, no single printed record has been issued to tell of the

work of the bureau. The only articles which have concerned it at all have been those contributed to the daily press of Charles City whenever any unusual report has come in. Of the many phases of interest in connection with this work and of its scientific value one might well write at length. I wish here, however, to mention only one of the many unusual and interesting days in the history of the bureau.

There has never been published in our part of the state any record of bluebird migration which has been as complete and detailed as that record which was taken by the bureau in 1917. We have never had any other year which compared with that in point of numbers or concentration of migrating bluebirds. I do not know whether the migrants chose a new route that year and thus struck Charles City for the first time within our recorded years, or whether the weather conditions or some manner of disturbance in the place from which they came compelled them to amass and make their northward flight in more concentrated fashion than was their custom. I only know that March 14, 1917, shall go down in the history of the Bird Bureau and in all written bird records of our part of the state, as "Bluebird Day." Before coming to the actual reports of that day we must investigate the conditions leading up to the event.

The first bluebird record for that year was reported on February twenty-fifth by Dr. E. P. Hummel.[1] On that date, a single bluebird was seen four miles East of Charles City. The first part of March seems to have been a continuous change of freezing and thawing, with no very cold weather. March sixth is recorded as cloudy, puddles in the street and considerable thawing. On the seventh there was ice everywhere. On the eighth the weather was mild and by the ninth ice was again thawing. My record for the tenth reads as follows: "Snow deep in places. Water

[1] Reported in notes of Mrs. Mary A. Dutton, Bird Bureau Recorder.

everywhere. Heard half a dozen bluebirds while on tramp this A. M."[2] On the eleventh I was again on a tramp and saw a flock of forty or more. Most of the snow was gone by that date. Some of the ice in the river was also going down stream. It snowed nearly all day the twelfth but the temperature remained high. On the fourteenth I find the following comment: "Part of last night and this morning six to eight inches of damp snow fell here and the weather has turned considerably colder."[3] This, then, is the sort of background which we secured for the Bluebird day which brought such splendid records. That February twenty-fifth is an unusually early date for the appearance of the bluebird, is commented upon in a report from the Califor Naturalist Club which appeared in its bird notes in the local press. In 1914, the first bluebird was reported on March seventh. In 1915, March twenty-seventh was the first date of appearance, and in 1916, March twelve. March third, 1918, and March sixteen, 1919, completes our record of first appearances.

On the fourteenth of March, 1917, the first day after the article soliciting bird records appeared in the local press, eighteen different observers reported bluebirds. One flock which was estimated to consist of at least two hundred individuals was reported from northwest of town. Another which was reported by several observers and which contained about one hundred birds passed through the city about mid-day, flying toward the river. On March ninth, a large flock of bluebirds was reported some nine miles south-east of town by Mrs. H. E. Winterink. The location of this flock was significant because it was in a region of moderately dense woods where much food might be obtained. Also, it was not far from the river. There seems to be sufficient evidence that the migrating birds of this region follow the river to a far greater extent than we

[2] Quoted from Daily Record of H. Brown for March 10, 1917.

[3] Note in report of Mrs. Ella E. Webster, Bird Bureau Recorder.

realized when we first began our work. That this large flock should be any one of the large ones discovered following the course of the river on the fourteenth can not be definitely stated. It is possible that the birds found plenty in that wood so that they remained for a number of days, and then continued in their flight when a warmer day appeared. It is of interest to note that the first records of migrants invariably come from locations near the river or from woods but a little distance from the stream. On March fourteenth, Mr. C. L. Webster, living only a block from the Cedar River, in the South-eastern migration path, reported a large flock of bluebirds which remained for some time in that vicinity. At noon of the same day a flock, of which eighty-two were definitely counted by Master Harold Fredrickson, was seen in the central portion of town, not more than three blocks from the river, but seemingly headed for an inland route by which they would cut off a peculiar bend in the river and reach a swampy portion and big wood beyond. About this same time of day reports came from five different sources of scattered pairs or small flocks of bluebirds in the same general part of town. All of these sources might have been in the migration from the direction which the larger flocks seemed to take. Two reports had come of flocks seen very early in the morning of this same day, but they were both of moderately small numbers. As the day progressed we found that the flock which had been reported at noon in the central part of town had evidently reached the end of the cut-off which they made in going through the city rather than following the river direct. There was a flock of some fifty or more seen at the end of this land route. Then, still later in the day as evidenced by the sequence of the records of the bureau, a report came from the edge of some woods located some three miles to the North-west of Charles City, of a flock of probably two hundred individuals which was seen flying over the site of a last year's garden. Some of the flock paused and made a meal of asparagus berries

which were still left from the preceding year. Thus, within the time from eight A. M. until very late in the afternoon the bluebird record was reported. The eight o'clock record of the morning was of interest in that some birds were then past the city and were seen going in a northwesterly direction.

There were several evidences that the birds were hungry for they were reported by several observers as stopping long enough to pick up some dried berries, or other seed food.

The reason for the comparatively long pause in going through the city may be found, I think, in the protection which the buildings offered. The very early date of their arrival may explain their deliberateness in proceeding.

On March fifteenth, the record tells us that the sun was shining brightly, and that the mercury stood at twenty above zero.[1] On the sixteenth, there was quite a different report. "A howling blizzard. 9:30 A. M. mercury thirty degrees above zero. There had been four telephone calls from persons solicitous for the welfare of the birds."[1] We find on that date that three persons reported bluebirds seen, but only stray individuals; no flocks were recorded at all. At twelve-thirty P. M. Master Harold Fredrickson and his sister went in the blizzard to several evergreen outposts which are located on a point of the riverbank directly in the migration route which we have followed. They expected that there might be some small birds there which would need food. But when they reached the spot a large marsh hawk flew from one of the trees. On the way to school, these observers saw several bluebirds seeking shelter in an evergreen.

Later records for the bluebird during this same season are to be found in the same notes. On March twentieth Harold Fredrickson reported finding three dead bluebirds near a brick school building against which I presume they had been dashed by the violence of the blizzard. The day

[1] From Record of Mrs. Mary Dutton, Bureau Recorder.

following seems to have been a secondary climax in the migrations. Three observers reported them on this date. It had now become beautiful weather again, water was everywhere and Winter seemed really to have lost his hold. A flock of one hundred-fifty bluebirds was seen by Mrs. Ella Webster at her home on the river bank, and Mr. Harold Newton saw a flock of one hundred individuals on the same day. After this the new order was introduced; for the robins, meadowlarks and red-wings came, then Winter had surely gone and Spring had arrived.

There is a beautiful prophetic spirit in the appearance of the bluebird so very early, before man has even dared to dream that Spring is at hand. Each year we welcome this bird with more grateful hearts than on the year preceding.

There is one other note which I wish to include in this article, not because it belongs in a bluebird account, but because it seems to be linked in its inexplainable peculiarity with this early bluebird migration.

On March sixteenth of this same year, 1917, Miss Harriet Clark reported a rose-breasted grosbeak. This is the earliest record for the grosbeak which Floyd county has ever had. The bird was seen again by the same observer on the eighteenth. For some five or more years a pair of these birds had a nest in an apple tree in Miss Clark's yard. Each year the family had been watched with the greatest interest. It was near this same location that this early arrival was discovered in 1917. Just what happened to the bird when the blizzard came on of course we do not know but the fact that the nest in the apple tree was not completed that year leads one to the belief that a tragedy, which only Winter could be held accountable for, was the result of the sweet singer's early arrival.

Within a week from the time that the notice first appeared in the daily press, asking for bird notes, fifty-three reports reached the bureau. These were given by thirty-six different observers, of which not more than a dozen

were club members or associated in any way with its former work. Since that time of course many new people have joined in the work and the notes are yearly growing more valuable.

A SYNOPSIS OF THE GENUS THRYOMANES

BY HARRY C. OBERHOLSER

Since the publication of the writer's revision of the genus *Thryomanes*,[1] additional data concerning the geographic distribution, status, and relationships of several of the forms have been accumulating. Some of these have already been published by Mr. H. S. Swarth, in his excellent article on the Pacific Coast races of *Thryomanes bewickii*,[2] and by Mr. Robert Ridgway in his treatment of the genus in the "Birds of North and Middle America."[3] The remainder we purpose to present here, together with, for convenience, a brief synopsis of all the forms of the genus, including a revision of their geographic distribution. For detailed descriptions and comparisons the three contributions above mentioned should be consulted. We are much indebted to Dr. J. Grinnell and Mr. H. S. Swarth for the loan of material from the Pacific coast region.

The genus *Thryomanes* at present consists of four species, one of these, *Thryomanes bewickii*, comprising 16 geographic races, one of which we are here describing as new.

Genus THRYOMANES Sclater.

Thryomanes Sclater, Cat. Coll. Amer. Birds, May, 1862, p. 22 (subgenus of *Thryothorus*).

Type.—Troglodytes bewickii Audubon, by original designation.

[1] Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 421–450.

[2] Proc. Calif. Acad. Sci., ser. 4., VI, No. 4, May 8, 1916, pp. 53–85, pl. 2.

[3] Bull. U. S. Nat. Mus., No. 50, pt. 3, 1904, pp. 548–569.

Geographic distribution.—Southern British Columbia, the United States, and Mexico.

THRYOMANES ALBINUCHUS (Cabot).

Troglodytes albinucha Cabot, Proc. Bost. Soc. Nat. Hist., II, 1847, p. 258.

Thryothorus petenicus Salvin, Proc. Zoöl. Soc. Lond. 1863, p. 187 (Sakluk, near Peten, Guatemala).

Type locality.—Yalahao, Yucatan.

Geographic distribution.—Yucatan and northern Guatemala.

Remarks.—This species is without doubt a member of the genus *Thryomanes,* as sometime ago claimed by Mr. Ridgway.[1]

THRYOMANES BEWICKII BEWICKII (Audubon).

Troglodytes bewickii Audubon, Ornith. Biog., 1, 1831, p. 96.

Type locality.—St. Francisville, Louisiana.

Geographic distribution.—Southeastern United States. Breeds locally north to central Pennsylvania, northern Ohio, southern Michigan, northern Illinois, central Iowa, and southeastern Nebraska; west to eastern Kansas and eastern Oklahoma; south to northeastern Texas, central Arkansas, northern Mississippi, central Alabama, and central South Carolina; east to central South Carolina, central Virginia, and the District of Columbia. Winters south to coast of the Gulf of Mexico, from Florida to eastern Texas. Casual east to southern New Jersey and north to south central New Hampshire and southern Ontario.

THRYOMANES BEWICKII CRYPTUS Oberholser.

Thryothorus bewickii leucogaster Baird, Rev. Amer. Birds, I, 1864, p. 127 (nec *Troglodytes leucogastra,* Gould, quae *Hemiura leucogastris*).

Thryomanes bewickii cryptus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 422, 425.

[1] Bull. U. S. Nat. Mus., No. 50, pt. 3, 1904, p. 551.

Type locality.—San Antonio, Texas.

Geographic distribution.—Resident from central Kansas, south through central Oklahoma and central Texas to the Mexican States of Tamaulipas and Nuevo Leon.

THRYOMANES BEWICKII EREMOPHILUS Oberholser.

Thryomanes bewickii eremophilus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 422, 427.

Type locality.—Big Hatchet Mountains, Grant County, New Mexico.

Geographic distribution.—Breeds in the western United States north to southern Wyoming (Superior), southern Utah, and southern Nevada; west to southwestern Nevada, southeastern California, central Sonora, and western Durango; south to Durango and central Zacatecas; east to central Zacatecas, Coahuila, western Texas, and eastern Colorado. Casual in winter east to central Texas.

Remarks.—The name *Thryomanes bewickii bairdi*[1] is commonly used for this form, but this name belongs to the race from the State of Oaxaca in southern Mexico, from which the present subspecies varies in its narrower superciliary stripe, somewhat paler and more grayish upper parts, and lighter flanks. The range of *Thryomanes bewickii eremophilus* is, moreover, widely separated from that of *Thryomanes bewickii bairdi* by two other darker races, *Thryomanes bewickii percnus* and *Thryomanes bewickii murinus*. The proper name for the race inhabiting southwestern United States is, therefore, not *Thryomanes bewickii bairdi*, but *Thryomanes bewickii eremophilus*.

THRYOMANES BEWICKII MURINUS (Hartlaub).

Thryothorus murinus Hartlaub, Rev. et Mag. de Zool, ser. 2, IV, 1852, p. 4.

Type locality.—Rio Frio, Mexico, Mexico.

Geographic distribution.—East central Mexico, resi-

[1] *Thryothorus bairdi* Salvin and Godman, Biol. Centr.-Amer., Aves, I, 1880, p. 95.

dent north to San Luis Potosi; west to State of Mexico; south to Morelos; and east to Tlaxcala and Hidalgo.

THRYOMANES BEWICKII BAIRDI (Salvin and Godman).

Thryothorus bairdi Salvin and Godman, Biol. Centr.-Amer., Aves, I, 1880, p. 95.

Type locality.—Oaxaca, Oaxaca, Mexico.

Geographic distribution.—Resident in southeastern Mexico, from the State of Oaxaca and southwestern Vera Cruz to southern Puebla.

THRYOMANES BEWICKII PERCNUS Oberholser.

Thryomanes bewickii percnus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 422, 429.

Type locality.—Etzatlan, Jalisco.

Geographic distribution.—Mexican State of Jalisco.

THRYOMANES BEWICKII CERROENSIS (Anthony).

Thryothorus cerroensis Anthony, Auk, XIV, No. 2, April, 1897, p. 166.

Type locality.—Cerros Island, Lower California.

Geographic distribution.—Cerros Island, Lower California, and the adjacent mainland in the north central portion of the peninsula of Lower California, north to about 30 degrees north latitude.

Remarks.—This race has commonly been united with *Thryomanes bewickii charienturus,* although Messrs. Thayer and Bangs have shown [1] that it is a readily recognizable form. It differs from *Thryomanes bewickii charienturus* in its smaller size, particularly of the bill, and in its less heavily barred lower tail-coverts. It was originally described from Cerros Island, Lower California, but occurs also on the mainland.

THRYOMANES BEWICKII CHARIENTURUS Oberholser.

Thryomanes bewickii charienturus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 423, 435.

[1] Condor, IX, 1907, p. 79.

Type locality.—Nachoguero Valley, northern Lower California.

Geographic distribution. — Southwestern California and northern Lower California; north to central Tulare County, San Benito County, and northern Monterey County; west to the Pacific coast; south to northern Lower California at about 30 degrees north latitude; and east to the San Jacinto Mountains and eastern Kern County.

Remarks.—Birds from northern Lower California represent the extreme of the grayish differentiation of this race. Those from Los Angeles County are somewhat more rufescent and incline thus toward *Thryomanes bewickii drymoecus.* This is still more the case with birds from San Luis Obispo County, which we have previously referred to the latter form, but which now, with much additional material, Mr. Swarth has placed with the present subspecies. The breeding birds from the vicinity of Monterey, Pacific Grove, and Seaside on the southern side of Monterey Bay in northern Monterey County, which on a previous occasion we referred to *Thryomanes bewickii spilurus,* are decidedly more grayish than that race, and are indeed very much like *Thryomanes bewickii charienturus* from Lower California, although somewhat darker and with a slightly shorter tail. Mr. Swarth records and maps specimens from Monterey and Pacific Grove,[1] California, as *Thryomanes bewickii spilurus,* but the specimens which passed through his hands bear the identification *Thryomanes bewickii charienturus,* in which identification we concur. This is further substantiated by a considerable additional series from both Pacific Grove and Seaside. It is interesting to note that with this addition, the northwestern limit of the range of *Thryomanes bewickii charienturus* along the coast becomes substantially the same as that of *Toxostoma rediviva rediviva.*[2]

[1] Proc. Calif. Acad. Sci., ser. 4, VI, No. 4, p. 67, pl. 2.
[2] Auk, XXXV, June, 1918, p. 53.

THRYOMANES BEWICKII CATALINAE Grinnell.

Thryomanes bewicki catalinae Grinnell, Univ. Calif. Publ. Zool., V, No. 8, Feb. 21, 1910, p. 308.

Type locality.—Avalon, Santa Catalina Island, Santa Barbara Islands, California.

Geographic distribution.—Santa Catalina Island, California.

THRYOMANES BEWICKII LEUCOPHRYS (Anthony).

Thryothorus leucophrys Anthony, Auk, XII, No. 1, January, 1895, p. 52.

Type locality.—San Clemente Island, Santa Barbara Islands, California.

Geographic distribution.—San Clemente Island, California.

Remarks.—This form is often treated as a distinct species, but individual variation so clearly shows its intergradation with the mainland races that a trinomial best represents its relationship.

THRYOMANES BEWICKII NESOPHILUS Oberholser.

Thryomanes bewickii nesophilus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 423, 442.

Type locality.—Santa Cruz Island, Santa Barbara Islands, California.

Geographic distribution.—Santa Cruz and Santa Rosa islands in the Santa Barbara group, California.

THRYOMANES BEWICKII DRYMOECUS Oberholser.

Thryomanes bewickii drymoecus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 19, 1898, pp. 423, 437.

Type locality.—Baird, Shasta County, California.

Geographic distribution.—Central and northeastern California, north to the interior of southern Oregon; west to Trinity County and central Contra Costa County; south to Fresno County; and east to western Inyo County and the Warner Mountains.

THRYOMANES BEWICKII SPILURUS (Vigors).

Troglodytes spilurus Vigors, Zool. Voyage Blossom, 1839, p. 18, pl. IV, fig. 1.

Type locality.—San Francisco, California.[1]

Geographic distribution.—Coast region of central California, south to the northern side of Monterey Bay; north to the southern and eastern sides of San Francisco Bay; and east to Santa Clara and Contra Costa counties, California. Casual in winter to the Cosumnes River, California.

Remarks.—As previously shown,[2] the type of this race must have come from the vicinity of either Monterey Bay or San Francisco, probably from the latter. In order definitely to settle this point as far as it is now possible to do, we here definitely designate San Francisco, California, as the type locality of *Troglodytes spilurus* Vigors.

THRYOMANES BEWICKII MARINENSIS Grinnell.

Thryomanes bewickii marinensis Grinnell, Univ. Calif. Publ. Zool., V, No. 8, Feb. 21, 1910, p. 307.

Type locality.—Nicasio, Marin County, California.

Geographic distribution.—Coast region of California, from the northern side of San Francisco Bay north to about the boundary of the State of Oregon.

THRYOMANES BEWICKII CALOPHONUS Oberholser.

Tryomanes bewickii calophonus Oberholser, Proc. U. S. Nat. Mus., XXI, Nov. 21, 1898, pp. 422, 440.

Type locality.—South Park, King County, Washington.

Geographic distribution.—The coast region of southwestern Oregon, north through western Washington to Puget Sound, and to Vancouver Island, British Columbia; and east to the Cascade Mountains except in southwestern Oregon.

Remarks.—Representatives of this race from Van-

[1] Here for the first time definitely fixed.

[2] Oberholser, Proc. U. S. Nat. Mus. XXI, Nov. 19, 1898, p. 439.

couver Island, kindly loaned from the collection of the Museum of Vertebrate Zoölogy, by Dr. Joseph Grinnell, average a very little lighter, particularly on the upper parts, than birds from the Puget Sound region, which latter represent the most extreme development of dark color in this subspecies; and to this variation Mr. H. S. Swarth has already called attention.[1] There seems, however, to be no difference between birds from Vancouver Island and those from southwestern Washington and the coast of Oregon, which, therefore, would have to be referred to the same subspecies were any separation made of the birds from Vancouver Island. The differences exhibited by the latter, however, are in our opinion, too slight and too much affected by individual variation to warrant subspecific recognition, and we therefore think Mr. Swarth quite right in refraining from giving the bird from Vancouver Island a name.

THRYOMANES BEWICKII ARIBORIUS, subsp. nov.

Chars. subsp.—Similar to *Thryomanes bewickii calophonus,* but upper parts decidedly lighter and of a more rufescent brown, and the flanks also more rufescent.

Description.—Type, adult female, No. 136701, U. S. National Museum, Biological Survey Collection; Agassiz, British Columbia, December 5, 1895; C. P. Streator. Upper parts between Prout's brown and cinnamon brown, but the rump with concealed roundish silver white spots; central tail-feathers dark hair brown, more rufescent and about the color of the back basally, and regularly though narrowly barred with brownish black; remainder of the tail fuscous black, the outer webs of the rectrices with narrow bars of brownish black and wide bars of rufescent hair brown, these bars confined on the outer feathers to the basal portion but continuing throughout on the inner feathers; and the two pairs of feathers next to the middle pair with broad tips of light hair brown, the remaining

[1] Proc. Calif. Acad. Sci., ser. 4, VI, No. 4, May 8, 1916, p. 60.

pairs with terminal portions of lighter gray, between light hair brown and smoke gray, all of these tips barred narrowly and obscurely with hair brown, and the terminal portion of the outer web of the two external pairs of rectrices with two dull white spots; wings light fuscous, but the tertials and outer webs of secondaries and of all but the outer primaries with broad bars of the color of the back; all the lesser and median coverts, and the exposed portions of the greater coverts, like the back though rather duller; superciliary stripe white; lores grayish white mixed with dark brown; cheeks and auriculars grayish white with narrow streaks and flecks of clove brown; broad postocular stripe dark olive brown; sides of neck like the back, but inferiorly somewhat mixed with gray; chin and throat white; breast, jugulum, and middle of abdomen brownish white; sides of breast and of body between light grayish olive and drab; flanks buffy brown; crissum white, rather irregularly barred with brownish black, and basally tinged with wood brown; lining of wing grayish white with flecks of hair brown on the outer portion.

Measurements.—Male:[1] wing, 52-54.5 (average, 53.4) mm.; tail, 50-55 (52.6); exposed culmen, 15-16.5 (15.5); tarsus, 19-22 (19.8); middle toe without claw, 16-19 (17.3).

Female:[2] wing, 50.5 - 52.5 (average, 51.3) mm.; tail 49.5 - 52.5 (50.5); exposed culmen, 14-15 (14.4); tarsus, 19; middle toe without claw, 16-17.5 (16.6).

Type locality.—Agassiz, British Columbia.

Geographic distribution.—Southwestern corner of British Columbia, south to adjacent corner of northwestern Washington.

Remarks.—When *Thryomanes bewickii calophonus* was first described, these specimens from extreme northwestern Washington and southwestern British Columbia were included in that race as their color discrepancies were at that time supposed to be individual. More material

[1] Eight specimens, from British Columbia and Washington.

[2] Four specimens, from British Columbia and Washington.

and later study have shown the geographic significance of these differences. Although *Thryomanes bewickii ariborius* has a comparatively limited distribution, it is a well-marked form and certainly deserves subspecific separation. Birds from southwestern British Columbia show the most extreme manifestation of characters, but birds from Mt. Vernon, northwestern Washington, are undoubtedly referable to the same subspecies although they verge somewhat toward *Thryomanes bewickii calophonus.* The difference between *Thryomanes bewickii ariborius* and *Thryomanes bewickii calophonus* is fairly comparable to that existing between *Thryomanes bewickii marinensis* and *Thryomanes bewickii spilurus,* the characters in each case being wholly those of coloration; and the former two races are but large editions of the latter two. As already noted under *Thryomanes bewickii calophonus,* birds from Vancouver Island are to be referred to true *Thryomanes bewickii calophonus,* rather than to the present race.

There is apparently no difference in size between *Thryomanes bewickii ariborius* and *Thryomanes bewickii calophonus,* as the following detailed measurements of the former will show:

MEASUREMENTS OF SPECIMENS OF *Thryomanes bewickii ariborius.*

U. S. Nat. Mu. No.	Sex	Locality	Date	Wing	Tail	Exposed culmen	Tarsus	M. toe witho't claw
136700	♂	Agassiz, B. C.	Dec. 5, 1895	53.5	53.5	16	19	17.5
136699	♂	Agassiz, B. C.	Nov. 30, 1895	54.5	53	15	19.5	17
113651	♂	New Westminster, B.C.		54	55	16.5	22	19
113652	♂	New Westminster, B.C.	Mar. 27, 1888	52.5	51	16	20	
45952	♂	British Columbia	Oct. 23, 1865	52	51	15	19.5	17
136697	♂	Mt. Vernon, Wash.	Dec. 12, 1895	53.5	53	15	19.5	16
136696	♂	Mt. Vernon, Wash.	Dec. 12, 1895	53	50	15	19.5	17.5
136698	♂	Mt. Vernon, Wash.	Dec. 12, 1895	54	54.5		19.5	17
136701	♀	Agassiz, B. C.	Dec. 5, 1895	51.5	50	14	19	17.5
136695	♀	Mt. Vernon, Wash.	Dec. 12, 1895	52.5	52.5	15	19	16
136694	♀	Mt. Vernon, Wash.	Dec. 12, 1895	50.5	50	14.5	19	16
156389	♀	Mt. Vernon, Wash.	June 25, 1897	50.5	49.5	14	19	17

THRYOMANES BREVICAUDUS Ridgway.

Thryomanes brevicauda Ridgway, Bull. U. S. Geol. & Georg. Surv. Terr., II, No. 2, 1876, p. 186.

Type locality.—Guadalupe Island, Lower California.

Geographic distribution.—Guadalupe Island, Lower California.

THRYOMANES INSULARIS (Lawrence).

Troglodytes insularis Lawrence, Ann. Lyc. Nat. Hist. N. Y., X, 1871, p. 3. (ex Baird, MS.).

Type locality.—Socorro Island, Revillagigedo Islands, Colima, Mexico.

Geographic distribution.—Socorro Island, Revillagigedo Islands, Colima, Mexico.

THE ANNUAL MEETING

The sixth annual meeting of The Wilson Ornithological Club was held December 29 and 30 at St. Louis, Mo. As an affiliated organization of the American Association for the Advancement of Science the meetings of the club were held with those of the Association in the new Soldan High School building.

MORNING SESSION, DECEMBER 29.

The first session of the meeting was opened at 10 a. m. by the President, Professor Myron H. Swenk, of the University of Nebraska, and the morning was given over to business. First in order was the reading of a report submitted by the retiring Treasurer, F. M. Phelps. By careful management during the year a small cash balance was shown to the credit of the Club. A report was made by Secretary Ganier on his activities for the year. Editor Jones gave the status and told the needs of the official organ, The Wilson Bulletin. President Swenk gave a resume of the work of the past year and outlined many activities that could be profitably undertaken in the next.

The matter of increasing the size of The Wilson Bulletin was discussed with interest and it developed that a number of papers were on the editor's waiting list. A considerable advance in the cost of printing had made it necessary to cut the size of The Bulletin, and to meet this added cost it was decided upon that active steps be taken to increase the Club's membership.

The furnishing of seperata of the main articles in The Bulletin, when desired by the contributor, was taken up and it was decided not to discontinue the practice when contributors make request in advance and bear the actual cost of the reprints. A schedule of these costs will be published elsewhere.

Suggestions as to the place of the next annual meeting were brought up and it was decided to meet in Chicago, in December, 1920, again with the American Association for the Advancement of Science.

A committee consisting of Messrs. Stephens, Gunthorp and Ganier was appointed to look into the suggestion that the name of the Wilson Ornithological Club be changed to the Wilson Ornithological Society, and make their report at the next annual meeting.

A list of twenty-five new members, recommended by the Council, was read by the Secretary and ratified by the Club.

President Swenk closed the session by naming a committee to nominate officers for the new year.

AFTERNOON SESSION.

The nominating committee handed in the following list of names for officers during 1920:

President—Dr. R. M. Strong, Chicago, Ill.

Vice-President—Harry C. Oberholser, Washington, D. C.

Secretary—Albert F. Ganier, Nashville, Tenn.

Treasurer—George L. Fordyce, Youngstown, Ohio.

Editor—Lynds Jones, Oberlin, Ohio.

Council—Dr. M. H. Swenk, Lincoln, Neb.; Dr. T. C. Stephens, Sioux City, Iowa; Dr. B. R. Bales, Circleville, Ohio.

A motion accepting the report of the nominating committee was carried and the new officers declared elected.

The papers for the afternoon session were as follows:

"The Teaching of Ornithology in the Colleges of the Middle West" (charts), Prof. Horace Gunthorp, Washburn College, Topeka, Kansas.

"The New Standard Catalog for Oölogical Exchange" (charts), Dr. Blenn R. Bales, Circleville, Ohio.

"Some Interesting Records of Nebraska Birds for the Year 1919," C. E. Mickel and R. W. Dawson, University of Nebraska, Lincoln, Nebr.

"Observations on Habits and Behavior in the Genus Tyrannus" (slides), Dr. T. C. Stephens, Morningside College, Sioux City, Iowa.

"A Robin Roost" (slides), Prof. A. C. Webb, Nashville, Tenn.

"The Terns of the Lake Erie Islands" (slides), Prof. Z. P. Metcalf, A. and M. College, W. Raleigh, N. C.

"The Cormorant-Heron Rookery at Reelfoot Lake, Tenn" (photos), Albert F. Ganier, Nashville, Tenn.

The evening session was held down town and consisted in a sociable and informal exchange of experiences and ideas, followed by a substantial bill of fare.

MORNING SESSION, DECEMBER 30.

After the disposal of several minor matters of business, the program was resumed.

Mr. Otto Widman exhibited several specimens of considerable interest, including a hybrid between the Fulvous and Black-bellied Tree Ducks. This specimen had been collected in Missouri.

The following papers came in order:

"Whippoorwill Calls" (charts), Prof. Dayton Stoner, State University of Iowa, Iowa Coty, Iowa.

"Observations on the Birdlife of Central Illinois," Prof. Thos. L. Hankinson, Charleston, Ill.

"The Summer Life of Tringa canutus (Knot), in N. W. Greenland," W. Elmer Ekblaw, University of Illinois, Champaign, Ill.

"The Preferred Method of Treatment of Local Bird Lists," Dr. Lynds Jones, Oberlin College, Oberlin, Ohio.

"Three Ornithological Pilgrimages," Miss Althea R. Sherman, National, Iowa.

"Some Observations in the Kalamazoo Valley" (slides), Gerald Alan Abbott, Otsego, Mich.

The program was completed by the reading of the address of the retiring President, a most interesting and instructive paper, entitled, "A Century of Change in the Ornithology of Nebraska" (Prof. Myron H. Swenk, University of Nebraska, Lincoln, Nebr.).

AFTERNOON SESSION.

The papers and business of the meeting having been disposed of, the Club split for joint meetings with the Zoölogists and the Entomologists.

The sessions of the St. Louis meeting were most interesting and profitable.

MEMBERSHIP ROLL OF THE WILSON ORNITHOLOGICAL CLUB

ACTIVE MEMBERS

Abbott, Gerard Alan, Sanford, Fla.
Abel, Arthur R., 1301 Newton Ave., Sioux City, Iowa.

Bailey, Mrs. Florence M., 1834 Kalorama Road, Washington, D. C.
Bailey, H. B., Box 112, Newport News, Va.
Bailey, H. H., Box 112, Newport News, Va.
Barnes, Hon. R. M., Lacon, Ill.
Barrows, Prof. W. B., Agricultural College, East Lansing, Mich.
Bennett, Walter W., Sioux City, Iowa.
Bishop, Dr. Louis B., 356 Orange St., New Haven, Conn.
Blain, Dr. Alex. W., Jr., 727 Jefferson Ave., Detroit, Mich.
Bradbury, W. C., 1440 Race St., Denver, Colo.
Brandt, H. W., 2025 E. 88th St., Cleveland, Ohio.
Bruen, Frank, 69 Prospect St., Bristol, Conn.
Burns, Frank L., Berwyn, Pa.
Burtch, Verdi, Branchport, N. Y.
Butler, Amos W., State House, Indianapolis, Ind.

Cahn, A. R., 4720 Greenwood Ave., Chicago, Ill.
Carter, Prof. Charles, Parsons College, Fairfield, Iowa.
Chambers, W. Lee, Eagle Rock, Los Angeles Co., Calif.
Chapman, Frank M., Am. Mus. Nat. History, New York, N. Y.
Childs, John Lewis, Floral Park, N. Y.
Coffin, Mrs. Lucy Baxter, 3232 Ellis Ave., Chicago, Ill.
Craigmile, Miss Esther A., 24 S. Grant St., Hinsdale, Ill.
Crosby, Maunsell S., Grasmere, Rhinebeck, N. Y.

Dawson, Rev. W. Leon, R. F. D. No. 3, Santa Barbara, Calif.
Deane, Ruthven, 1222 N. State St., Chicago, Ill.
Deane, Walter, 29 Brewster St., Cambridge, Mass.
Dickey, Donald R., San Rafael Heights, Pasadena, Calif.
Durfee, Owen, Box 125, Fall River, Mass.
Dwight, Dr. Jonathan, Jr., 43 W. 70th St., New York, N. Y.

Eastman, F. B., Major 344 Inf., Camp Grant, Ill.
Eifrig, Prof. C. W. G., Concordia College, Oak Park, Ill.

Farquhar, Arthur, York, Pa.
Fisher, Dr. G. Clyde, Am. Mus. Nat. History, New York, N. Y.
Flanagan, John H., 89 Power St., Providence, R. I.
Fleming, J. H., 267 Rusholme Road, Toronto, Canada.
Floyd, Joseph L., 508 New Harter Bank Bldg., Canton, Ohio.

Ford, E. R., 4741 Beacon St., Chicago, Ill.
Fuertes, Louis Agassiz, Cornell Heights, Ithaca, N. Y.

Gabrielson, I. N., 220 Post Office Bldg., Portland, Ore.
Gault, Benj. T., 2313 Washington Blvd., Chicago, Ill.
Goelitz, W. A., 11 Carthage Rd., Rochester, N. Y.
Goodrich, Mrs. Calvin, 306 Virginia Park, Detroit, Mich.
Grinnell, Dr. Joseph, Museum Vertebrate Zoology, Berkeley, Calif.
Guild, E. L., Conrad, Iowa.
Gunthorp, Horace, 1525 College Ave., Topeka, Kansas.

Hall, F. H., Geneva, N. Y.
Hankinson, T. L., Charleston, Ill.
Harris, Harry, 18 W. 52nd St., Kansas City, Mo.
Hasslock, Miss Lillie, 1020 3d Ave. So., Nashville, Tenn.
Hathaway, Harry S., Box 1466, Providence, R. I.
Hayward, W. J., 2919 Jackson St., Sioux City, Iowa.
Healy, L. E., Red Lake Falls, Minn.
Henderson, Hon. Junius, Boulder, Colo.
Henninger, Rev. W. F., New Bremen, Ohio.
Herrick, F. H., Western Reserve Univ., Cleveland, Ohio.
Hill, Thomas R., Care Provident Life and Trust Co., Philadelphia, Pa.
Himmel, Prof. W. J., Radcliffe, Iowa.
Hine, Prof. James S., Ohio State Univ., Columbus, Ohio.
Hix, George E., 100 W. 91st St., New York, N. Y.
Hollister, Ned, Nat. Zoological Park, Washington, D. C.
Hopkins, A. W., M.D., 47 McGovern Ave., Ashtabula, Ohio.
Howland, R. H., Upper Montclair, N. J.
Howser, W. D., State Game Warden, Nashville, Tenn.
Hunt, Chreswell J., 5847 West Superior St., Chicago, Ill.
Huntington, H. G., Onawa, Iowa.

Jackson, Dr. H. H. T., National Museum, Washington, D. C.
Jessee, Dr. R. L., Philo, Ill.
Johns, E. W., 112 E. Bloomington St., Kingsley, Iowa.
Jones, Lynds, Spear Laboratory, Oberlin, Ohio.

Kahmann, K. W., 2513-15 Lincoln Ave., Chicago, Ill.
Kenworthy, E. M., 1202 Delaware Ave., Wilmington, Del.
Kirn, Albert J., Solomon, Kans.
Knickerbocker, C. K., 1214 McCormick Bldg., Chicago, Ill.
Kretzmann, Prof. P. E., 3337a Oregon Ave., St. Louis, Mo.
Kuser, John Dryden, Faircourt, Bernardsville, N. J.

Ladd, Harry S., 4354 McPherson Ave., St. Louis, Mo.
Laubenfels, Max de, 108 South 5th Ave., LaGrange, Ill.
Lewy, Dr. Alfred, 6016 Stony Island Ave., Chicago, Ill.

McAtee, Waldo Lee, Biological Survey, Washington, D. C.
McGregor, Richard C., Bureau of Science, Manila, P. I.
Mercur, J. Watts, Jr., Wallingford, Pa.
Mershon, Wm. B., Saginaw, Mich.
Metcalf, F. P., Biological Survey, Washington, D. C.
Metcalf, Prof. Zeno P., A. and M. College, Raleigh, N. C.
Mitchell, Dr. Walton I., Paonia, Delta Co., Colo.
Morse, Harry G., Huron, Ohio.
Morris, C. H., McConnelsville, Ohio.

Norris, Joseph Parker, Jr., 2122 Pine St., Philadelphia, Pa.
Northrup, Miss Elizabeth, 182 W. Marion Ave., Youngstown, O.

Oberholser, Harry C., 2805 18th St., N. W., Washington, D. C.
Orr, Ellison, Waukon, Iowa.
Osgood, Prof. W. H., Field Mus. Nat. Hist., Chicago, Ill.

Pennock, C. J., Acad. Nat. Sci., Philadelphia, Penn.
Phelps, Frank M., 212 East 4th St., Elyria, Ohio.
Praeger, W. E., 421 Douglass Ave., Kalamazoo, Mich.

Ramsden, Chas. T., Apartado 146, Guantanamo, Cuba.
Read, A. C., Santa Barbara, Isles of Pines, Cuba.
Richardson, Wm. D., 4215 Prairie Ave., Chicago, Ill.
Riley, J. H., U. S. Nat. Museum, Washington, D. C.
Roads, Miss Katie M., 463 Vine St., Hillsboro, Ohio.
Roberts, Dr. Thos. S., Animal Biol. Bldg., Univ. of Minn., Minneapolis, Minn.
Rogers, Chas. H., care Amer. Mus. of Nat. Hist., 77th St. and Central Park, New York, N. Y.
Rush, Mrs. Edward F., 50 Ferry Ave., East, Detroit, Mich.

Sage, John H., Portland, Conn.
Sanborn, Colin C., Box 97, Rutherford, N. J.
Schantz, Mrs. O. M., 5215 West 24th St., Cicero, Ill.
Sherman, Miss Althea R., National, Iowa.
Skinner, Dr. H. H., 234 Mitchell Bldg., North Yakima, Wash.
Smith, Elbert E., Edgewood, R. F. D., Bristol, Conn.
Smith, Prof. Frank M., Univ. of Ill., Urbana, Ill.
Smith, Jesse Lowe, 141 S. 2d St., Highland Park, Ill.
Stephens, T. C., Morningside College, Sioux City, Iowa.
Stoddard, H. L., 7141 University Ave., Chicago, Ill.
Strong, Dr. R. M., 706 S. Lincoln St., Chicago, Ill.
Swenk, Prof. Myron H., 1410 North 37th St., Lincoln, Neb.
Swope, Eugene, College Hill, Cincinnati, Ohio.
Taverner, P. A., Victoria Museum, Ottawa, Canada.

Taylor, Miss Beryl, 1744 D Ave., Cedar Rapids, Iowa.
Taylor, Mrs. H. J., 1711 Douglas St., Sioux City, Iowa.
Terrill, Lewis MacI., 44 Stanley Ave., St. Lambert, Quebec, Canada.
Tinker, A. D., 1019 Church St., Ann Arbor, Mich.
Todd, W. E. Clyde, Carnegie Museum, Pittsburgh, Pa.
Truesdale, Fred, Paso Robles, Calif.
Tyler, Dr. Winsor M., 522 Massachusetts Ave., Lexington, Mass.

Wallace, Chas. R., 69 Columbus Ave., Delaware, Ohio.
Wallace, James S., No. 12 Wellington St., E. Toronto, Canada.
Walter, Dr. Herbert E., Brown University, Providence, R. I.
Warren, Edward R., 1511 Wood Ave., Colorado Springs, Colo.
Weatherill, Charlotte, 255 Villa St., Elgin, Ill.
Wetmore, Alex., Bureau of Biol. Survey, Washington, D. C.
Wheelock, Mrs. Irene G., 1040 Hinman Ave., Evanston, Ill.
Wheeler, Rev. H. E., Fayetteville, Ark.
Wilson, Burtis H., 105 Lincoln St., Joliet, Ill.
Williams, John, St. Marks, Fla.
Woodruff, Frank M., Acad. of Sciences, Lincoln Park, Chicago, Ill.
Young, John P., 1730 Massachusetts Ave., Washington, D. C.

SUSTAINING MEMBERS

Bales, Dr. B. R., Circleville, Ohio.
Bent, Arthur C., Taunton, Mass.
Coffin, Percival Brooks, 3232 Ellis Ave., Chicago, Ill.
Fordyce, George L., 40 Lincoln Ave., Youngstown, Ohio.
Ganier, A. F., 2507 Ashwood Ave., Nashville, Tenn.
Gray, D. R., Rockdale, Maury Co., Tenn.
Mills, Wier R., Pierson, Iowa.
Morgan, Samuel M., 1301 Ashland Block, Chicago, Ill.
Norris, Roy C., 725 North 10th St., Richmond, Ind.
Saunders, Wm. E., 352 Clarence St., London, Ontario, Canada.
Schantz, Orpheus M., 5215 West 24th St., Cicero, Ill.
Swales, B. H., Museum of Zoölogy, Ann Arbor, Mich.
Thayer, Hon. John E., Box 98 Lancaster, Mass.
Whitney, Thomas H., Atlantic, Iowa.

ASSOCIATE MEMBERS

Adams, Benj., 155 Amity St., Brooklyn, N. Y.
Adams, Mrs. John, Bay Shore, Long Island. N. Y.
Allerton, Mrs. Agnes, Lake Geneva, Wis.
Allen, Prof. A. A., Ithaca, N. Y.
Allen, A. F., 2224 Pearl St., Sioux City, Iowa.
Anderson, A. J., 1822 West Palmer Ave., Sioux City, Iowa.
Arthur, Stanley Clisby, 1109 Henry Clay Ave., New Orleans, La.

Bailey, Alfred M., La. State Museum, New Orleans, La.

Bailey, Bernard, R. F. D. 1, Elk River, Minn.
Bailey, Mrs. Mary, 2109 Nebraska St., Sioux City, Iowa.
Baldwin, S. Prentiss, Williamson Bldg., Cleveland, Ohio.
Baxter, Maria, 44 So. 18th St., Richmond, Ind.
Bennett, Rev. George, Iowa City, Iowa.
Bergtold, Dr. W. H., 1159 Race St., Denver, Colo.
Berlin, Mrs. D., Wimbledon, N. Dak.
Blincoe, Ben. J., Bardstown, Ky.
Bolt, Benj., 1421 Prospect Ave., Kansas City, Mo.
Bond, Harry L., Lakefield, Minn.
Braislin, Dr. Wm. C., 425 Clinton Ave., Brooklyn, N. Y.
Brown, Howard Clark, 701 Iowa St., Charles City, Iowa.
Buchner, Mrs. E. M., 3637 Fullerton Ave., Chicago, Ill.
Burgess, F. E., Cushing, Iowa.
Burleigh, Thos. D., 825 North Negley Ave., Pittsburgh, Pa.
Burton, Rev. Wm., Alliance, Ohio.

Chamberlain, C. W., 36 Lincoln St., Boston, Mass.
Coale, H. K., Highland Park, Ill.
Compton, James S., Care Eureka Coll., Eureka, Ill.
Cook, Orange, Chardon, Ohio.
Coulter, Stanley G., Purdue Univ., Lafayette, Ind.
Craigmile, Miss Mary Agnes, Rantoul, Ill.
Crooks, Miss Minna, 408 No. Walnut St., Lansing, Mich.
Curtis, Harold, Towaco, N. J.

Daggett, Frank S., Museum, Exposition Park, Los Angeles, Calif.
Danforth, Stuart, 115 North Sixth Ave., New Brunswick, N. J.
Davis, Mrs. Frank V., 2096 Inka Ave., Columbus, Ohio.
Davidson, Mrs. F. S., 1302 W., So. Grand Ave., Springfield, Ill.
Dawson, Prof. R. W., 1105 N. 33d St., Lincoln, Neb.
Devine, J. L., 310-35 No. Dearborn St., Chicago, Ill.
Dill, Prof. Homer R., Room 10 New Sci. Bldg., Iowa City, Iowa.
Dille, Fred M., Valentine, Neb.
Doolittle, E. A., Box 444, Painesville, Ohio.
Dodson, Joseph H., Kankakee, Ill.

Ekblaw, George E., R. F. D. No. 3, Rantoul, Ill.
Ekblaw, W. Elmer, 713 W. Washington Blvd., Urbana, Ill.
Evans, Wm. B., 205 E. Central Ave., Moorestown, N. J.
Ewers, A. F., 3411 Pestalozzi Ave., St. Louis, Mo.

Fay, Frank S., Meriden, Conn.
Fenton, Carroll Lane, Walker Museum, Univ. of Chicago, Chicago, Ill.
Field, Irving A., Clark University, Worcester, Mass.
Fisher, Miss E. W., 2222 Spruce St., Philadelphia, Pa.
Foft, Samuel F., Waukee, Iowa.

Forbush, Edward H., Room 136, State House, Boston, Mass.
Friedrich, G., 3029 Belmont Ave., Chicago, Ill.

Giehm, Helen, Box 356, Hartley, Iowa.
Gifford, Paul C., 73 Whittier Ave., Olneyville, R. I.
Gingerich, Mrs. L. O., Springfield, S. Dak.
Ginther, H. J., 8303 Brookline Ave., Cleveland, Ohio.
Grant, W. W., 600 Castle St., Geneva, N. Y.
Griffee, Bill, R. F. D. 3, Box 68, Corvallis, Ore.

Hadeler, E. W., Painesville, Ohio.
Hamilton, Dr. B. A., Highland Park, Ill.
Hanna, Miss Margaret M., 1020 W. Wayne St., Fort Wayne, Ind.
Harrison, H. M., 503 Linden St., Camden, N. J.
Hayden, F. J., Nokomis, Manatee County, Fla.
Hennessey, Frank C., 457 Albert St., Ottawa, Canada.
Holland, H. M., Box 515, Galesburg, Ill.
Honywill, A. W., Jr., 211 Ridgefield St., Hartford, Conn.
Hood, Miss Adah, 1002 Ninth St., Sioux City, Iowa.
Hughes, Mrs. C. B., 716 Rockhill St., Fort Wayne, Ind.
Hulsberg, E. F., 340 S. Catherine Ave., LaGrange, Ill.

Jackson, Ralph W., R. D. No. 1, Cambridge, Maryland.
Johnson Frank Edgar, 16 Amackassin Terrace, Yonkers, N. Y.
Jenney, C. F., Court House, Boston, Mass.

Kavanagh, Mrs. J. M., 212 South Kerrington Ave., LaGrange, Ill.
Kennard, Fred H., Newton Centre, Mass.
Knapp, Mrs. Nell Davis, 105 Fowler Ave., West Lafayette, Ind.
Kohler, Louis S., 47 Wagner Place, Hawthorne, N. J.

La Prade, W. H., Jr., Forsyth Bldg., Atlanta, Ga.
Law, J. Eugene, 833½ S. Catalina St., Los Angeles Calif.
Laws, Wayne, Norton, Kansas.
Lightner, D. H., Citizens Trust and Savings Bank, Aberdeen, S. Dak.
Lincoln, Frederick C., Colorado Museum Nat. Hist. Denver, Colo.
Little, Luther, Calif. Academy of Sciences, San Francisco, Calif.
Lyon, W. L., 432 7th St., Moline, Ill.

McBride, John F., 340 South Ritter St., Indianapolis, Ind.
McConnell, Thos., 151 Center St., Emsworth, Pa.
McMillen, Wheeler, Ada, Ohio.
McNeil, Dr. Chas. A., Sedalia, Mo.
Mahood, Miss Etta, R. D. No. 1, Rapid City, Mich.
Malin, Mrs. Joda, Wylusing, Wis.
Maltby, Fred, 1412 8th Ave., Seattle, Wish.
Mayfield, Dr. Geo. R., care Vanderbilt Univ., Nashville, Tenn.
Mitchell, Catherine Adams, Riverside, Ill.

Newcomb, C. A., Jr., Newcomb Endicott Co., Woodward Ave., Detroit, Mich.
Newton, Thos. D., 5624 Prairie Ave., Chicago, Ill.

Palmer, T. S., 1939 Biltmore St., Washington, D. C.
Pellett, Frank C., Hamilton, Ill.
Philip, P. B., St. Paul Bldg., 220 Broadway, New York, N. Y.
Piepenbrok, Rev. E. A., 113 West Pine St., Albion, Mich.
Plath, Karl, 2847 Giddings St., Ravenswood Sta., Chicago, Ill.
Potter, J. K., Sixth and Bailey Sts., Camden, N. J.
Pullen, Henry, Victoria, B. C.

Raymond, Mrs. C. E., 21 Third St., Hinsdale, Ill.
Reed, Miss M. Isabelle, 348 Wilson Ave., Columbus, Ohio.
Rich., Dr. Guy C., 1820 El Cerrito Place, Hollywood, Calif.
Rich, Waldo L., 15 Rock St., Saratoga Springs, N. Y.
Riis, Paul B., 301 Shaw St., Rockford, Ill.
Rowe, Paul, Glenwood, Iowa,
Ryder, Mrs. R. O., 1041 Franklin Ave., Columbus, Ohio.

Schantz, F. A., 43 Schneider Ave., Kitchener, Canada.
Scholte, Robt. P., Pella, Iowa.
Schwab, Dr. E. M., 2732 Woodburn Ave., Cincinnati, Ohio.
Scott, Mrs. R. T., 603 North Seventh St., Cambridge, Ohio.
Scullen, Prof. H. A., Pullman, Wash.
Shankland, F. N., Willoughby, Ohio.
Sihler, P. Wm., 518 State Blvd., Fort Wayne, Ind.
Silliman, O. P., 220 Salinas St., Salinas, Calif.
Silloway, P. M., 404 Fredonia Ave., Peoria, Ill.
Smith, Arthur F., Little Rock, Iowa.
Smith, Napier, 46 Cote des Neiges Road, Apt. 21, Montreal, Can.
Snyder, Will Edwin, 226 Front St., Beaver Dam, Wis.
Soper, J. D., R. R. No. 1, Preston, Ontario.
Sparks, Miss Marion, 1207 West Oregon St., Urbana, Ill.
Spiker, Chas. J., R. R. No. 1, Williams, Iowa.
Spurrell, John A., R. D. No. 1, Wall Lake, Iowa.
Stevens, Dr. J. F., Box 1546, Lincoln, Neb.
Stockbridge, Chas. A., 2323 Webster St., Fort Wayne, Ind.
Stone, Miss Lucy B., 533 Franklin Ave., Columbus, Ohio.
Stoner, Dayton, 603 Summit St., Iowa City, Iowa.
Stoner, Emerson A., Box 444, Benicia, Calif.
Strode, W. S., Lewiston, Ill.
Stuart, F. A., Marshall, Mich.
Swarth, Harry S., Mus. Vert, Zoöl., Berkeley, Calif.
Swift, Dr. C. H., 5632 Maryland Ave., Hyde Park, Sta., Chicago, Ill.

Test, Dr. F. C., 4620 Greenwood Ave., Chicago, Ill.

Thomas, W. S., 316 Frick Bldg., Pittsburgh, Pa.
Townsend, C. W., 76 Marlborough St., Boston, Mass.
Townsend, Rev. Manley B., 188 County St., Attleboro, Mass.
Tripp, N., Forest, Ontario.
Tufts, R. W., Wolfville, Nova Scotia, Canada.

Vesey, W. G., 120 High St., Painesville, Ohio.
Visher, S. S., 416 South Dunn St., Bloomington, Ind.

Wagner, Millard Van, R. F. D., Saltpoint, N. Y.
Warner, Willis H., Box 434, Youngstown, Ohio.
Webb, Prof. A. C., 309 Wilburn St., Nashville, Tenn.
Wharram, S. V., Austinburg, Ohio.
Whitehead, Mrs. Nellie Shaver, 1816 N. Alabama St., Indianapolis, Ind.
Williams, Noel J., Arnolds Park, Iowa.
Wilson, R. A., Nashville, Tenn.
Winslow, A. M., Mech. Eng. Dept., Univ. of Washington, Seattle, Wash.
Wood, A. A., Coldstream, Ontario.
Wright, Miss H. H., 1637 Gratiot Ave., Saginaw, W. S., Mich.
Wright, Horace W., 107 Pinckney St., Boston, Mass.

HONORARY MEMBERS

Ballard, H. H., Pittsfield, Mass.
Ridgway, Prof. R., U. S. Nat. Museum, Washington, D. C.
Nehrling, H., Gotha, Fla.
Widmann, O., 5105 Enright Ave., St. Louis, Mo.

DECEASED MEMBERS

Andrews, Calista
Bailey, B. H.
Barnes, W. E.
Beers, Henry
Bendire, Maj. Charles E.
Benners, Archie
Betts, Norman De Witt
Blain, Merrill W.
Brewster, William
Clark, John W.
Chipperfield, Paul C.
Cooke, Dr. Wells W.
Eddy, Newell A.
Ferry, John Farwell
Holmes, La Rue Klingle.
Holmes, Fred W.
Jewell, Susan G.
King, Rev. J. W.
Knight, Ora Willis
McKechnie, Frederick B.
Marble, Charles C.
Newbury, F. C.
Peck, H. E.
Purdie, Henry A.
Reinecke, Ottomar
Roper, Kenyon
Sammons, B. C.
Sand, Isabelle L.
Trowbridge, Chas.
Wilson, Sidney S.
Wood, J. Claire

MEMBERS OF NEBRASKA ORNITHOLOGISTS' UNION

Mrs. W. F. Baxter, 123 S. 37th Ave., Omaha, Nebraska.
Rev. J. M. Bates, Red Cloud, Nebraska.
Mr. Cyrus A. Black, Kearney, Nebraska.
Mrs. George Blinco, Sec'y Chadron Audubon Society, Chadron, Neb.
Mr. A. M. Brooking, Inland, Nebraska.
Mr. H. F. Bruner, Kola, Nebraska.
Mrs. Lily Ruegg Button, 616 W. 8th St., Fremont, Nebraska.
Mr. Ralph W. Dawson, 1105 N. 33rd St., Lincoln, Nebraska.
Miss Estelle Ducker, County Supt. Schools, Red Cloud, Nebraska.
Miss Blanche Garten, 1213 H St., Lincoln, Nebraska.
Mr. LeRoy M. Gates, Chadron, Nebraska.
Mr. Frederick Haecker, 603 South 26th St., Lincoln, Nebraska.
Dr. H. Hapeman, Minden, Nebraska.
Mrs. Mona C. Hapeman, Minden, Nebraska.
Dr. David C. Hilton, 2832 O St., Lincoln, Nebraska.
Mrs. H. F. Hole, Public Library, Fairbury, Nebraska.
Mr. L. O. Horsky, Mailing Division, P. O., Omaha, Nebraska.
Mrs. Lulu Kortz Hudson, Simeon, Nebraska.
Mrs. H. C. Johnson, Superior, Nebraska.
Miss Jessie M. Kellogg, Red Cloud, Nebraska.
Mr. Walter G. Landers, Norfolk, Nebraska.
Mrs. G. A. Loveland, 1130 S. 20th St., Lincoln, Nebraska.
Dr. H. B. Lowry, 843 So. 10th St., Lincoln, Nebraska.
Mr. Charles S. Ludlow, Box 137, R. R. No. 4, Red Cloud, Nebraska.
Mrs. Charles W. McCaskill, 1802 P. St., University Place, Nebraska.
Mrs. A. E. McCrystal, 609 S. 14th St., Lincoln, Nebraska.
Miss Jeanette McDonald, 313 S. 27th St., Lincoln, Nebraska.
Mrs. L. H. McKillip, Seward, Nebraska.
Mr. Clarence E. Mickel, 3214 U St., Lincoln, Nebraska.
Mr. Edwin Overing, Red Cloud, Nebraska.
Mrs. George H. Payne, W. Dodge St., Omaha, Nebraska.
Mr. Ben Pegg, Red Cloud, Nebraska.
Miss Elizabeth Rooney, 2802 Dodge St., Omaha, Nebraska.
Mr. J. C. Schlater, Oshkosh, Nebraska.
Mr. L. Sessions, Norfolk, Nebraska.
Mrs. A. E. Sheldon, 1319 S. 23rd St., Lincoln, Nebraska.
Miss Caroline Stringer, 2803 Poppleton Ave., Omaha, Nebraska.
Miss Anne Stuart, 1906 D St., Lincoln, Nebraska.
Prof. M. H. Swenk, 1410 North 37th St., Lincoln, Nebraska.
Miss Edith Tobitt, Omaha Public Library, Omaha, Nebraska.
Prof. Wilson Tout, Supt. of Schools, North Platte, Nebraska.
Mr. Lucius H. Watson, Post Office, Lincoln, Nebraska.
Mr. Ewald Witt, Box 3. R. R. No. 1, Scribner, Nebraska.
Mrs. Jennie Woodworth, Ayr, Nebraska.

THE
WILSON BULLETIN
NO. 111
A QUARTERLY JOURNAL OF ORNITHOLOGY

VOL. XXXII JUNE, 1920 NO. 2

OLD SERIES VOL. XXXII. NEW SERIES VOL. XXVII.

LIST OF BIRDS MADE DURING EIGHTEEN MONTHS' SERVICE IN FRANCE AND GERMANY

BY COLIN CAMPBELL SANBORN

Read before the Chicago Ornithological Society, June 10, 1919.

During the war I was in the artillery, with the 42d, or Rainbow Division, which saw eighteen months' service in France and Germany, from October 19, 1917, to April 19, 1919. While in France I had but little time to give to birds, and most of my observations were made while on duty. During our three and a half months' stay in Germany, however, I found quite a little time to study ornithology.

In order that the reader may follow me in my reference to localities, I shall give a brief resumé of the time spent in the different parts of the countries.

Landing at St. Nazaire, France, the artillery brigade went to Camp de Coetquedan, in Brittany. This camp is about fifty miles from the coast, and is one of the oldest artillery ranges known, having been started by Napoleon. The country here is hilly and the ground very rocky. We stayed here until February 18, 1918, when we left for the front.

The first hundred and ten days at the front, or until about the last of June, were spent in the Lorraine sector, between the towns of Luneville and Baccart. This was more or less of a quiet sector and I had a little time to myself, but could never go very far from the horse lines,

which were in the little town of Gelecourt and later in Azerailles.

From the time we left here until we reached Germany I had no time to give to birds, as we were made shock troops and were kept pretty busy until the armistice. July 1 to 23 saw us in the Champagne, near Suippes; July 28 to August 16 at Chateau Thierry; September 7 to 27 at St. Mihiel; and until November 11 in the Argonne. There then followed a month of hiking until we settled in Germany, about twelve miles from the Rhine, in the Coblenz area.

My regiment was in two towns in Germany; the first, for two and a half months, was Dernau, situated on the Ahr River, with the Eiffel Mountains on the right and a high plateau rising sharply on the left. I spent much of my time in the mountains, where there were many pines and the birds were rather plentiful. The second town, where we spent our last month, was Eckendorf, which was on the plateau to the left of Dernau, and about six miles distant. There were but few woods here, the town being in the middle of a broad plain.

Besides the birds, I found the game in Germany very interesting. In the fields around Eckendorf the rabbits were very plentiful, especially just before sundown. I have counted as many as sixty in a short walk across the fields. In the mountains, deer and wild pigs were fairly common. I have seen deer (they were a small form of white tail) a number of times, but could never hit one with my automatic. I was also hunting wild pigs with a forester, whom I met, but without results. He, however, had better luck, for he shot ten in one week. One evening, at his house, I tasted the meat of one he had shot that morning and found it quite spicy and gamey, but not too strong to be unpleasant.

I only met two taxidermists while abroad. One was a barber in St. Nazaire, but as I had just landed, I had not mastered French well enough to talk with him very much. The other was in Germany; he was a very good taxider-

mist, and I saw a number of his boars' heads that showed very good workmanship. He was also an artist of some ability in painting animals and birds. I tried to arrange a trade of some skins with him, but he seemed only interested in getting one—an eagle. I thought this rather funny, but found out he wanted me to remove the cotton from the body and replace it with tobacco and cigarettes, whereupon I told him as many things as my knowledge of German would permit and left.

I am indebted to Dr. T. S. Palmer, Secretary of the A. O. U., for my identification of the birds seen, as he was kind enough to have sent to me from London H. K. Swann's "Handbook of British Birds." I was able to identify all birds as seen by this book, and would have been at a great loss without it.

He follows my list of birds, which, while rather incomplete, I believe contains most of the common species:

1. *Turdus viscivorus*—Mistle Thrush.

The only one seen was brought to me dead in Eckendorf, on March 8, 1919. I prepared the specimen, which is now in the collection of Henry K. Coale, Highland Park, Ill.

2. *Turdus iliacus*—Redwing.

A pair was seen near Dernau on February 4, 1919. They reminded me of our robin very much, both in size, action and notes.

3. *Turdus merula*—Blackbird.

A few were seen in France, but I found it more common in Germany from January on.

4. *Erithacus rubecula*—Redbreast.

Very common both in France and Germany. The first one seen was at St. Nazaire in November, 1917. They have a clear, sweet song, and seemed to prefer a thick wood to sing in. This bird is better known as the European Robin.

5. *Daulias luscinia*—Nightingale.

I never saw this bird, but heard the song at night, which could have been no other. In willows, near a river or small stream, one could be sure of hearing them any night during the summer.

6. *Regulus crestatus*—Goldcrest.

7. *Regulus ignicapillus*—Firecrest.

Both these Kinglets were found very common in winter, wherever there were any pines. They are very much like our own Kinglets.

8. *C. cinclus aquaticus*—Dipper.

First seen in Germany, along the Ahr River, on February 19, 1919. I saw the bird here four or five times and think a nest could have been found later. This was the only bird seen.

9. *Acredule caudata vagans*—British Long-tailed Titmouse.

I first met with this bird in the St. Mihiel sector in September, 1918, when a number of flocks were seen. Later, I found them very common in the Eiffel Mountains, in Germany, during the winter.

10. *Parus major*—Great Titmouse.

This bird is very much like his cousin, our Black-capped Chickadee, in his actions, but has more notes and more of a song. Very common in France and Germany.

11. *Parus cristatus*—Crested Titmouse.

Was first seen in November, 1917, at Coetquedan and next in July, 1918, in the Champagne, so it must breed there. Rather common in the Eiffel Mountains.

12. *Sitta caesia*—Nuthatch.

Only a few were seen and these in Germany, first in February. In March I saw one dodging in and out of some holes in a tree, but although watched very closely, no nest ever developed.

13. *T. troglodytes*—Wren.

Found commonly throughout France and Germany at all times of the year.

14. *Certhia familiaris*—Tree Creeper.

Can hardly be told from our Brown Creeper. A few were seen in Germany, generally in company with the Kinglets.

15. *Motacilla alba*—White Wagtail.

This was the first bird seen in France, and were found very common there, but did not see many after reaching Germany.

16. *Muscicapa grisola*—Spotted Flycatcher.

The only one recorded was in the Champagne, July 16, 1918. I was hauling ammunition at the front and as we stopped the caisson by some barracks, this bird flew out and onto a wire over my head. These barracks, which had been badly shelled, were surrounded by gun positions, where heavy firing and shelling had been going on. Why that bird stayed during the five-hour barrage that shook the ground, or if it had not been there came there during the heavy firing, is more than I can tell.

17. *Hirundo rustica*—Swallow.

This bird, much like our Barn Swallow, became very common during April, 1918, in Azerailles, and I saw many nests in the barns. The day we were about half way across the ocean, April 22, 1919, I was standing at the stern of the ship, when two swallows flew from the ship, out over my head and back again. I can-

not say whether they were Barn Swallows or the European bird.

18. *Chelidon urbica*—Martin.

Also very common at Azerailles. They are glossy black, with the exception of the rump and underparts, which are white, and build a nest like the Cliff Swallow, under the eaves of buildings.

19. *Carduelis elegans*—Goldfinch.

A large flock was seen three times during February in the mountains in Germany.

20. *Chrysomitris spinus*—Siskin.

One pair in Germany on February 19, 1919, is my only record.

21. *Passer domesticus*—House Sparrow.

Can one go anywhere without finding these birds?

22. *Fringilla cœlebs*—Chaffinch.

Easily the most common bird in France and Germany. I collected a nest and five eggs April 25, 1918, at Gelecourt, France, which is now in the collection of Henry K. Coale.

23. *Emberiza citrinella*—Yellow Hammer.

Next to the Chaffinch, the most common bird seen; often found in company with them.

24. *Garrulus glandarius*—Jay.

One seen in St. Mihiel sector September 22, 1918, and later found fairly common in the mountains in Germany. At first I was kept busy following strange calls, only to trace them to this bird, which is very shy and hard to get a sight of in the pines.

25. *Pica rustica*—Magpie.

To me this is the most beautiful bird in France; they seemed to be the final touch to every field and hedge. April 1, 1918, I saw a Magpie fly from its nest about forty feet up in an oak, but as we were on the march could not stop. Another nest, full of young, not more than ten feet up in a large willow bush, was seen April 21, 1918, but also being on the road at this time, had no chance to examine it closer.

26. *Corvus corone*—Carrion-Crow.

Common everywhere. They have a habit of sailing, so that at a distance one often takes them for a hawk. The nest is just like our Crows'. Two nests were found, one March 28, 1918, with one egg, and the other April 15, 1918, with five eggs. This last set was collected, but my "buddies" did not take oology as seriously as I did, so the eggs never reached home.

27. *Corvus cornix*—Hooded Crow.

Only seen in Germany—first, March 3, 1919,—often in company with the Carrion Crow.

28. *Alauda arvensis*—Sky Lark.

Found commonly at all seasons in the fields, and always singing. At Coetquedan I saw one sing for fifteen minutes while the

brigade was firing a practice barrage. Another time, in the Lorraine sector, one sang off and on for a half hour while many high explosive and gas shells were bursting below him.

29. *Cypselus apus*—Swift.

A few seen in the Lorraine sector during April and May, 1918.

30. *Dendrocopus major*—Great Spotted Woodpecker.

31. *Dendrocopus minor*—Lesser Spotted Woodpecker.

Much like our Hairy and Downy Woodpeckers. A few of each were seen at Coetquedan during the winter of 1917-1918.

32. *Gecinus viridis*—Green Woodpecker.

First seen November 3, 1917, at St. Nazaire and then not met with until once later, February 9, 1919, in Germany.

33. *Cuculus canorus*—Cuckoo.

A few seen around Gelecourt in April and May, 1918. Their call is exactly like the cuckoo clocks.

34. *Asio brachyotus*—Short-eared Owl.

35. *Syrnium aluco*—Tawny Owl.

Mounted specimens of these were seen in Germany. While in Eckendorf an Owl used to call every night near my room, but which one it was I do not know.

36. *Circus cyaneus*—Hen Harrier.

This bird is much like our Marsh Hawk. On the road from Azerailles to the front, during April and May, 1918, I saw a pair frequently. As the caissons came along the road these birds would fly from one telegraph pole to another and finally away over the fields. I believe they had a nest in the vicinity.

37. *Accipiter nisus*—Sparrow Hawk.

A few seen in France and Germany. My closest approach to this bird was on March 19, 1919, in Germany. As I came around a curve in the road I saw a Hawk fly into a flock of Yellow Hammers and capture one. Dismounting and getting out my glasses, I approached within twenty feet of the Hawk, which had flown to an apple tree and was starting his meal. I watched him for some time and then a poorly aimed rock frightened him away.

38. *Turtur turtur*—Turtle Dove.

Only one record for this bird. On August 19, 1918, the train had stopped and in some willows near the track I saw a dove. I identified the bird when it flew, as the tail was tipped with white.

39. *Perdix cinerea*—Common Partridge.

Seen at different times in the woods in France and Germany. On November 23, 1918, during the march into Germany, we stopped a short time on the road just outside of Arlons-Luxembourg and I saw a flock of seventeen of these birds feeding in a field a short distance away. I watched them with high powered binoculars for about fifteen minutes.

40. *Fulica atra*—Coot.

Saw quite a few from the train in France on the way to Brest, during the second week in April, 1919. Also many mounted specimens in Germany.

41. *Larus argentatus*—Herring Gull.

These birds stayed with the convoy all the way over. None were seen on the return trip, however, until the day we sighted land.

42. *Tachybaptes fluviatilis*—Little Grebe.

December 4, 1918, as we crossed the bridge from Ectenbroch, Luxembourg, into Germany, I saw a pair of these Grebes in the water under the bridge. The long line of artillery over them did not seem to bother them in the least.

Mounted specimens of the following birds were seen in Ahrwieler and Bad Neuenahr, Germany.

43. *Querquedula crecca*—Common Teal.

44. *Tetrao tetrix*—Black Grouse.

45. *Rallus aquaticus*—Water Rail.

Much like our Virginia Rail.

46. *Numenius arquatus*—Curlew.

A snipe which I never identified as either the Common or the Jack Snipe was seen a number of times. A friend of mine, whom I had hunted with a great deal in Illinois, Corporal Lyman Barr, had a machine gun set up near a small swamp and reported seeing many snipe there. This swamp used to get many "Overs," which were fired at a gun position near it, but according to Barr, the bursting shells and gas disturbed the birds very little, as they just flew a short ways. He saw them here every day for nearly two weeks.

Being so unsettled, and moving so often, I did not get much chance to watch the nests I found. It seemed that we always moved within a day or so after I would find a nest. I was greatly aided in my identifications by a pair of eight-power binoculars, which belonged to the B. C. Detail and which I had access to.

NOTES ON BIRDS OF WAKULLA COUNTY, FLORIDA

JOHN WILLIAMS, ST. MARKS, FLA.

(Continued from March, 1920, Wilson Bulletin.)

138. *Tyrannus tyrannus*—Kingbird.

Quite numerous about our villages as well as in the more open country generally. One pair building as late as July 18, 1915. Young left this nest August 22. In flocks of two hundred to three hundred or more during September as they travel southward. March 24, 1918, October 4, 1918.

139. *Tyrannus dominicensis*—Gray Kingbird.*

I have never seen this bird far from the coast and have only found it nesting within sight of the wide waters of our gulf. May 22, 1913, fresh eggs, June 6, 1915, young in nest almost grown, September 26, 1917.

140. *Myiarchus crinitus*—Crested Flycatcher.*

A noisy inhabitant of our villages and plantations and frequently nest at the border of timberlands. I have found them nesting in Martin boxes, in deserted dwellings, between a metal roofing and the under board sheathing, in stovepiping protruding through buildings, and in the broken corner of the porch of an occupied dwelling, but they usually select the deserted home of a Woodpecker. Local name, "Yellowhammer." April 1, 1918, September 23, 1913.

141. *Gayornis phœbe*—Phœbe.

Unlike many of our winter visitors from the North the Phœbe continues his gentle tones while with us, the while keeping time with swaying tail. October 1, 1917, April 4, 1915.

142. *Empidonax flaviventris*—Yellow-bellied Flycatcher.

Migrant. Dr. T. S. Palmer of the Biological Survey, identified the only living specimen I have seen as we passed through a small "island" a half mile back of our light house. May 2, 1919.

143. *Myiochanes virens*—Wood Pewee.

Summer resident. Not found here abundantly, but rather regularly distributed outside of the low timbered areas. April 15, 1918, October 15, 1916.

144. *Empidonax virescens*—Acadian Flycatcher.

Summer resident. Only found in limited numbers nesting along the river bottoms or in heavy timber bordering a pond or stream.

145. *Cyanocitta cristata florincola*—Florida Blue Jay.

Resident. Numerous throughout the county, frequenting villages and timbered tracts along streams and about ponds as well

* See Wilson Bulletin, June, 1919.

as in the more open pine woods to a more limited degree. Nest building begins by late March or early April.

146. *Corvus brachyrhynchos pascuus*—Florida Crow.

Excepting during a rather brief nesting season these birds are associated in flocks frequently numbering hundreds to thousands and breaking up during the feeding hours into smaller bands, but all congregating on the coast marshes or in heavy timber about sunset at a common roosting site. April 1, 1917, fresh eggs, May 3, 1914, young just out of nest.

147. *Corvus ossifragus*—Fish Crow.

Probably our most abundant resident species, and like the Florida Crow, is to be found in flocks during most of the year. At times while passing high overhead, a flock will perform evolutions, seemingly in dispute as to a course to be pursued, and a general circling and counter circling will continue for two or three minutes, when perhaps a direct flight will ensue for a few minutes, and again more confusion and circling, the whole performance enlivened by most emphatic demands and protests by apparently every member of the flock. Local name, "Jackdaw."

148. *Dolichonyx oryzivorous*—Bobolink.

The spring arrivals appear usually by mid-April and tarry until well along in May. The autumnal visit is more brief and extends usually during the first two weeks in September. Local name, "May bird." April 9, 1914, May 22, 1914, September 1, 1915, October 1, 1917.

149. *Molothrus ater*—Cowbird.

My own observations would not indicate the Cowbird at all numerous here, but from reports I take it they are found rather regularly in flocks of varying sizes from late summer through the winter. August 24, 1917, April 21, 1914.

150. *Agelaius phœniceus floridanus*—Florida Redwing.

Abundant in the vicinity of the coast and in more open sections about ponds and streams. Between nesting seasons they congregate in large flocks for the most part and repair to the marshes for a nightly roosting place. Commence laying May 10 to 15. Local name, "Rice bird."

151. *Sturnellá magna argutula*—Southern Meadowlark.

Numerous in flocks of twenty to fifty or more in the fall and winter along the coastal marshes, but nesting more abundantly farther inland. Song with less volume and not as melodious as that of the Northern form. Young ready to fly June 2, 1913.

152. *Icterus spurius*—Orchard Oriole.

Quite frequent near the coast wherever tree growth is congenial, and a common breeder throughout the more cleared areas

of the county. May 19, 1913, young in nest, July 12, 1916, young in nest. March 29, 1917, September 3, 1915.

153. *Quiscalus quiscula aglæus*—Florida Grackle.

Occur in flocks of several hundred during the cooler season and nest, frequently in small communities, along streams and about ponds generally throughout the region. Local name, "China-eyed Blackbird."

154. *Megaquiscalus major major*—Boat-tailed Grackle.

Resident. A fairly numerous species, frequenting the salt marshes almost exclusively. April 21, 1917, young about a week old, May 9, 1916, three fresh eggs. Local name, "Saltwater Blackbird."

155. *Carpodacus purpureus purpureus*—Purple Finch.

It may occur more regularly than my notes indicate. During some winters I do not see them. January 19, 1914, February 17, 1917.

156. *Astragalinus tristis tristis*—Goldfinch.

Occurs usually every winter, but I have not observed it in any considerable numbers. January 8, 1914, March 7, 1917.

157. *Prœcetes gramineus gramineus*—Vesper Sparrow.

A regular winter visitor, more abundant among the higher inland fields than on our lower sections. November 15, 1913, March 11, 1919.

158. *Passerculus sandwichensis savanna*—Savanna Sparrow.

An abundant species from October until April. Occurs on the broad coastal and river marshes as well as inland. October 16, 1916, May 10, 1919.

159. *Ammodramus savannarum australis*—Grasshopper Sparrow.

Perhaps this bird occurs regularly on migration. My only record is one shot on the Gulf shore, April 10, 1915, in bright breeding plumage.

160. *Passerherbulus henslowi*—Henslow's Sparrow.

A more or less regular winter visitor. One taken March 7, 1919.

161. *Passerherbulus nelsoni nelsoni*—Nelson's Sparrow.

I have not found the Sharptails abundant, but they occur regularly in winter on our extensive tidal marshes.

162. *Passerherbulus maritimus peninsulæ*—Scott Seaside Sparrow.

A regular and rather numerous resident of our larger tidal marshes. June 6, 1915, nest with one fresh egg.

163. *Passerherbulus maritimus fisheri*—Louisiana Seaside Sparrow.

Mr. Ludlow Griscom reports 8 at East Goose Creek, Wakulla County, Florida, on December 29, 1915. Bird Lore. January-February, 1916. It may be a regular winter visitor on our coast.

164. *Chondestes grammacus grammacus*—Lark Sparrow.

One bird shot and another was seen April 10, 1915. I have no further information relative to the occurrence of the species here.

165. *Zonotrichia albicollis*—White-throated Sparrow.

Usually occurs every winter in small flocks, remaining into April. November 15, 1917, April 21, 1914.

166. *Spizella passerina passerina*—Chipping Sparrow.

Probably a regular winter visitor in the higher parts of the county. About St. Marks only seen occasionally. December 24, 1916, twenty or more seen near Wakulla. April 13, 1918, two seen near St. Marks.

167. *Spizella pusilla pusilla*—Field Sparrow.

I have not found it a regular winter visitor. Another of the numerous species that shun our low country contiguous to the coast and are found more abundant even a few miles inland.

168. *Junco hyemalis hyemalis*—Slate-colored Junco.

My sole record was a single bird seen near Wakulla, six miles north of St. Marks, on December 24, 1916. As the bird was not taken there remains a doubt as to the exact form.

169. *Peucæa æstivalis æstivalis*—Pine-woods Sparrow.

Resident. Occurs in the more open piney woods sections and are most numerous in the higher, drier areas. Their sweet, inspiring little song is a charming bit of melody.

170. *Melospiza melodia melodia*—Song Sparrow.

A few are to be found every winter along shore and inland in suitable localities. October 9, 1916, March 26, 1914.

171. *Melospiza georgiana*—Swamp Sparrow.

I do not find it numerous, but regularly every winter in the marshes and about streams and ponds. November 21, 1913, May 9, 1916.

172. *Pipilo erythropthalmus erythropthalmus*—Towhee.

Found well scattered during the winter season except in the heavy timbered sections. April 10, 1918, May 3, 1919.

173. *Pipilo e. alleni*—White-eyed Towhee.

Resident. Quite numerous and widely distributed. Local name, "Jo ree."

174. *Cardinalis cardinalis floridanus*—Florida Cardinal.

An abundant resident, frequenting wooded "Branches" and borders of timbered areas. In winter flocks of ten to twenty or more often occur. Young out of nest May 4, 1918.

175. *Passerina cyanea*—Indigo Bunting.

A single specimen taken, June 21, 1913, constitutes my record for the species here.

176. *Piranga rubra rubra*—Summer Tanager.

A rather numerous breeding species, frequenting pine groves

or borders of hammocks. Much discredited from belief that they are quite destructive to honeybees. June 2, 1913, young just out of nest. April 28, 1918, fresh eggs, April 5, 1916, September 26, 1915.

177. *Progne subis subis*—Purple Martin.*

While local in their breeding distribution the "Martin" is frequently found in the pine woods far from any artificial nesting places. They may nest in holes in trees, although I have no definite knowledge thereof. The males usually, perhaps always, precede the females in their arrival in the spring. February 3 to February 14 is the range of their appearance as covered by several years' notes. June 12, 1915, young left boxes, October 2, 1916, latest date.

178. *Petrochelidon lunifrons lunifrons*—Cliff Swallow.

I had not previously seen this bird here until September 9, 1915, when one was noted in the company of forty or more Barn Swallows flying over the river near the fish houses at St. Marks. But a single bird was seen. It was observed repeatedly in the course of an hour or more. On September 13, 1915, one was seen over the river at fish houses. On May 10, 1917, five flew about the fish houses for some time. September 24, 1917, one was seen at the lighthouse in company with numbers of Tree and Barn Swallows.

179. *Hirundo erythrogastra*—Barn Swallow.

Migrant. I have no record of this species nesting with us, but they occur frequently almost every year until early June. June 18, 1915. I have but two records of single birds between June 18 and August 21, and with these exceptions the fall dates commence September 9. November 7, 1915, is my latest fall record. They occur in flocks of considerable size in September and early October.

180. *Irodoprocne bicolor*—Tree Swallow.

Occur in large flocks during the autumnal migrations and less numerous in the spring, while a few remain throughout the winter. September 9, 1915 and 1917, May 31, 1919.

181. *Stelgidopteryx serripennis*—Rough-winged Swallow.

A few remain almost every summer about St. Marks and rear their young. During the winter of 1916-17 a single bird was seen repeatedly about the fish houses until January 2. Usually few are seen after November 1. April 2, 1914, is earliest date for an arrival.

182. *Bombycilla cedrorum*—Cedar Waxwing.

Flocks of eight or ten to forty or more are not unusual from December until April-December 7, 1916, April 22, 1914.

183. *Lanius ludovicianus ludovicianus*—Loggerhead Shrike.

Resident. Generally distributed but occurring outside of the

* See Wilson Bulletin, September, 1919.

heavily timbered areas. One seen chasing a Savannah Sparrow for least 150 yards and then abandoned the chase. April 9, 1914, eggs nearly hatching. Local names, "French Mockingbird," "Nine Killer."

184. *Vireosylva olivacea*—Red-eyed Vireo.

Summer resident. Remain to nest with us in limited numbers only. April 1, 1917, October 26, 1913.

185. *Vireosylva gilva gilva*—Warbling Vireo.

Casual migrant. On May 26, 1916, I heard the song of this bird and observed it for some time in a Live Oak at close range. I have no other record.

186. *Lanivireo flavifrons*—Yellow-throated Vireo.

Seemingly but few remain to nest with us. March 25, 1916, is my earliest date for an arrival.

187. *Lanivireo solitarius solitarius*—Blue-headed Vireo.

A few remain through the winter, and during early March they are most numerous. December 16, 1916, March 19, 1917.

188. *Vireo griseus*—White-eyed Vireo.

I have not found this irrepressible in mid-winter, although it may occur sparingly. They frequent the river shores, branches and borders of ponds where they can find an abundance of dense undergrowth. March 11, 1914, October 26, 1913.

189. *Mniotilta varia*—Black and White Warbler.

A regular migrant and probably occurring regularly in winter, although I have noted it but seldom after November 1. July 21, 1915, October 28, 1916, January 15, 1916.

190. *Protonotaria citrea*—Prothonotary Warbler.

Summer resident. Along the wooded streams and river bottoms the clear, sweet strains of the Prothonotary are to be heard ringing. Earliest noted April 7, 1914.

191. *Vermivora celata celata*—Orange-crowned Warbler.

Probably a regular winter resident in our counry. I have not observed it as common.

192. *Compsothlypis americana americana*—Parula Warbler.

In the more open hammocks and along wooded streams and ponds the Parula haunts the moss-trailed trees throughout the greater part of the year. Probably a few at least winter with us. March 15, 1914, November 12, 1913.

193. *Dendroica tigrina*—Cape May Warbler.

It was a red-letter day when on May 2, 1919, in company with Dr. T. S. Palmer of the Biological Survey, and R. W. Williams, Esq., Department of Agriculture, we watched the movements of a handsome male of this species near our lighthouse. I have no other record.

194. *Dendroica æstiva æstiva*—Yellow Warbler.

I have not observed it as an abundant migrant, but usually see a few each fall and spring. April 11, 1919, October 8, 1918.

195. *Dendroica coronata*—Myrtle Warbler.

One of our most abundant winter visitors and distributed generally wherever tree growth is found, except it be in the deeper, dense hammocks. October 24, 1917, April 22, 1914.

196. *Dendroica magnolia*—Magnolia Warbler.

My lone record is for a single bird seen in the yard at the lighthouse September 30, 1917.

197. *Dendroica striata*—Black-poll Warbler.

My notes would indicate this to be of rather rare occurrence. April 14, 1914, October 26, 1913.

198. *Dendroica fusca*—Blackburnian Warbler.

A single bird noted October 18, 1914, is my only record.

199. *Dendroica dominica dominica*—Yellow-throated Warbler.

Occurs much more plentifully as a breeding bird than it does in winter. After October they are but little in evidence. January 14, 1914, one found dead; January 16, 1915, one seen.

200. *Dendroica virens*—Black-throated Green Warbler.

I have but two positive records: a bird was seen at close range October 26, 1913, another May 2, 1919.

201. *Dendroica vigorsi*—Pine Warbler.

Abundant in the more open pine timber. From late summer until early spring they frequently associate in flocks of twenty or thirty to one hundred or more and often glean their food on the ground. In a wet season it is not unusual to see them in the low flat woods wading and feeding in the shallow pools and frequently alighting on the lower trunks of trees. They seldom sing from late fall until after the colder weather is past, commencing about February 1 with their oft repeated and rather sweet trill. May 2, 1915, a pair nest building.

202. *Dendroica palmarum palmarum*—Palm Warbler.

Among the more abundant species that are with us in winter. Frequent fields and the open pine woods. September 26, 1918, May 2, 1919.

203. *Dendroica p. hypochrysea*—Yellow Palm Warbler.

Frequently associates with the preceding species, but is less numerous and usually arrive rather later. October 15, 1916, May 2, 1919.

204. *Dendroica discolor*—Prairie Warbler.

While this bird may be more common in the higher portions of our county, it evidently does not often visit our low districts; my only records are of birds seen, one at the lighthouse September 30, 1917, one September 15, 1918, one May 2, 1919.

205. *Sciurus aurocapillus*—Oven-bird.

Probably a regular winter resident, as I have several records from November 30 to March 14.

206. *Seiurus noveboracensis noveboracensis*—Water-Thrush.

Occurs regularly in suitable localities during migrations.

207. *Seiurus motacilla*—Louisiana Water-Thrush.

Neither species of Water-Thrush has been found numerous. September 2, 1913, April 3, 1915.

208. *Oporornis formosus*—Kentucky Warbler.

Migrant. On April 4, 1917, while visiting a large colony of Little Blue Herons, I was pleased to see one of these birds at close range.

209. *Oporornis agilis*—Connecticut Warbler.

On September 21, 1916, at a distance not exceeding twenty feet, I watched one of these birds feeding in a clump of weeds. This is the only one seen here.

210. *Geothlypis trichas ignota*—Florida Yellow-throat.

Resident. This species of cheerful song frequents the vicinity of rivers, bayous and ponds where there is an abundance of grasses and bushy growth. April 12, 1919, nest with four fresh eggs.

211. *Wilsonia citrina*—Hooded Warbler.

A regular but not abundant spring and fall migrant. April 3, 1915, September 24, 1914.

212. *Wilsonia canadensis*—Canada Warbler.

I had not seen the species here until the present year (1919). May 2 a ♀ was noted in yard at the lighthouse and a ♂ was observed in our village limits May 5, 1919.

213. *Setophaga ruticilla*—Redstart.

Seemingly it occurs regularly on migrations, but not in numbers. September 30, 1917, May 2, 1919.

214. *Anthus rubescens*—Pipit.

At times this bird of the far north appears in considerable numbers, while again we do not see it during an entire winter. November 2, 1916, March 25, 1914.

215. *Minus polyglottos polyglottos*—Mockingbird.

Very generally distributed except in the heavily wooded regions. The song season commences by late February or early March and continues except for a brief spell until late September. During the last of July and in August they have a silent season, but later are again in good tune. They are very destructive to strawberries where but small quantities of this fruit is grown.

216. *Dumetella carolinensis*—Catbird.

This bird does not seem to be numerous in our county and thus far I have failed to note it as a nesting bird. A few only appear to spend the colder season here. October 1, 1917, January 16, 1914, May 3, 1919.

217. *Toxostoma rufum*—Brown Thrasher.

Decidedly more numerous as a winter visitor than during the breeding season. While a few remain about St. Marks they are never abundant in summer near the coast.

218. *Thryothorus ludovicianus ludovicianus*—Carolina Wren.

Resident. Very generally distributed. May 15, 1914, fresh eggs July 8, 1914, fresh eggs.

219. *Thryomanes bewicki bewicki*—Bewick's Wren.

I have but a single record for our county: a bird seen at Wakulla March 16, 1918, and I think it seldom appears in our near-coast region.

220. *Troglodytes aëdon aëdon*—House Wren.

Winter visitor. Found about dwellings, in the open pine woods and in the heavier timbered bottoms. Occasionally in song while with us. October 3, 1916, April 17, 1916.

221. *Troglodytes aëdon parkmani*—Western House Wren.

Dr. Oberholser has identified a bird of this form taken at St. Marks February 9, 1914.

222. *Nannus hiemalis hiemalis*—Winter Wren.

I have found it less numerous than the House Wren, but a few are to be seen every winter. November 5, 1916, February 26, 1916.

223. *Cistothorus stellaris*—Short-billed Marsh Wren.

Winter Visitor. Doubtless this species is more numerous than my notes would indicate. Its extremely secretive habits in the thick marsh grasses often make identification uncertain. October 29, 1916, April 21, 1917.

224. *Telmato dytespalustris pelustris*—Long-billed Marsh Wren.

A rather common winter resident, as shown by specimens collected at that season.

225. *Telmatodytes p. iliacus*—Prairie Marsh Wren.

By letter dated March 12, 1918, R. W. Williams, Esq., of the U. S. Department of Agriculture, Washington, D. C., advises me he found this form in the marshes west of our lighthouse in November, 1917.

226. *Telmatodytes p. marianæ*—Marian's Marsh Wren.

A common resident of our salt water marshes.

227. *Certhia familiaris familiaris*—Brown Creeper.

A few are with us every winter. November 21, 1913, March 19, 1917.

228. *Sitta carolinensis atkinsi*—Florida White-breasted Nuthatch.

Resident. Found here in limited numbers only. Bird feeding a brooding mate March 22, 1914.

229. *Sitta pusilla*—Brown-headed Nuthatch.

Resident. A most active and generally distributed species. Nest with fresh eggs March 8, 1917.

230. *Bœolophus bicolor*—Tufted Titmouse.

Resident. Very generally distributed, but more numerous in the higher parts of the county. Nest-building begins about the middle of March.

231. *Penthestes carolinensis carolinensis*—Carolina Chickadee.

Resident. Found generally throughout the section in suitable localities. April 12, 1915, fresh eggs.

232. *Regulus satrapa satrapa*—Golden-crowned Kinglet.

Probably a few come every winter, but I have never found them common. October 26, 1913, January 6, 1914.

233. *Regulus calendule calendule*—Ruby-crowned Kinglet.

Winter visitor. Much more abundant with us than the preceding. Occasionally a low, sweet song effort is heard. October 28, 1916, April 19, 1915.

234. *Polioptila cærulea cærulea*—Blue-gray Gnatcatcher.

While not abundant with us in midwinter, at other times this dainty, active mite is to be found commonly in timber bordering streams and ponds. Nest with five fresh eggs April 17, 1916. On March 18, 1919, nest building commenced with one pair.

235. *Hylocichla mustelina*—Wood Thrush.

I have seen but a single bird in the county. On October 1, 1917, during a severe blow, one was seen in a thick clump of bushes near the lighthouse.

236. *Hylocichla fuscescens fuscescens*—Veery.

A migrant that does not appear to occur at all commonly. March 10, 1917, May 3, 1915.

237. *Hylocichla guttata pallasi*—Hermit Thrush.

Occur in considerable numbers during winter and early spring. October 28, 1916, April 11, 1919.

238. *Planesticus migratorius migratorius*—Robin.

Winter visitant. Not at all regular in its appearance here Sometimes it occurs in large flocks that seek the river bottoms for food and again we see but few during an entire winter.

239. *Sialia sialis sialis*—Bluebird.

While we hear the soft, gentle notes of the Bluebird throughout the nesting season they are much more numerous as a winter visitor.

Additional Species.

Not included in the enumeration, but believed to have occurred:

Olor columbianus—Whistling Swan.

A Swan was seen on the upper river, within a mile of our village, at various times, for several days, about 1904 or 1905.

Aramus vocerfus—Limpkin.

While I have not seen this bird here it has been accurately

described to me as having been observed by different persons. "Nigger-boy" it is called, "because it hollers so queer."

Ardea herodias herodias—Great Blue Heron.

A bird of this species shot January 20, 1919, measured: length 43½ in.; wing 18¼ in., bill on top 5 in., torsus 6½ in., sex, ♂. Dr. Oberholser writes me regarding this bird: "If you have correctly sexed the specimen I should say that your bird is without much doubt *Ardea herodias herodias* from the measurements you give. This form should be of more or less regular occurrence in winter in Florida, but as the distinction between it and *A. h. wardi* is partly in color I cannot be absolutely positive without seeing the specimen."

Guiraca cærulea cærulea—Blue Grosbeak.

Mr. John Linton has on at least two occasions seen a dark blue bird larger than an Indigo bird and not *Sialia sialis*. As the species has occurred in Loon County, next adjoining us to the north, it doubtless visits us occasionally.

Hylocichla ustulata swainsoni—Olive-backed Thrush.

On four occasions I have seen birds believed to be of this form, but no specimens have been taken. October 26, 1913, November 3 and November 21, 1913, and March 1, 1914.

INTRODUCED SPECIES.

Passer domesticus—English Sparrow.

While these birds have had a footing here for a good many years they increase but little about St. Marks and are not generally distributed over the county.

SUMMARY.

The species treated may be grouped as follows:

Residents	63
Summer Residents	30
Migrants	30
Winter Visitors	97
Casuals	14
Extinct or Disappeared	4
Native Species	238
Introduced	1
Need confirmation	5

A few of the species listed as Summer Residents may occasionally occur in winter. One or two given as migrants may nest here rarely. The list of Casuals has been extended to include some species that probably nested here formerly, may be seen here in summer, but of which no record can be found for their breeding with us in recent years.

General Notes

DESTRUCTION OF BIRDS BY TRAINS

George O. Ludcke, of Sioux City, reports a singular instance of the fatality which besets bird life. On October 11, 1919, he was proceeding by rail from Sioux City to a point in South Dakota for the purpose of shooting ducks. Having a personal acquaintance with the engineer of the train, he was invited to ride in the engine cab for a part of the journey. The trip being made at night, the track ahead of the engine was illuminated by the powerful rays of the electric headlight which is required by the law of South Dakota. As the locomotive rushed through the darkness, Mr. Ludcke observed in the light ahead of it great numbers of small birds, apparently aroused from the grass and weeds along the right of way by the noise of the passing train. It can be conjectured, also, that the birds may have been in migratory flight. However it may be, many of them, bewildered by the dazzling light of the locomotive, flew directly into it and were struck by the engine. Numbers of the birds struck the window glass of the engine cab with an impact almost sufficient to break it. In this way, Mr. Ludcke estimates, hundreds of birds were killed during the short time he was in the engine cab. He inquired of the engineer if such a thing were of frequent occurrence, and was told that birds often were killed in that manner, but not frequently in such numbers as on this particular occasion. The question immediately occurs, if this one train killed so many birds, how many other birds are similarly killed by the thousands of other trains which bear through the night everywhere during the migratory seasons? Mr. Ludcke is not certain about it, but he judges from the brief glimpses he had of the birds seen that the greater number of them were Prairie Horned Larks.

A. F. ALLEN.

Sioux City, Ia., Nov. 10, 1919.

WINTER WREN IN WESTERN IOWA

The Winter Wren (*Nannus hiemalis hiemalis*) is a rare visitor in this locality, and there are few existing records of it. The only local records that I have knowledge of are those of Dr. G. C. Rich, who recorded it on March 11, 1908, and April 4, 1909. No record of the species breeding here has been established. An individual (sex not determined) was seen in the outskirts of Stone Park, Sioux City, on October 5, 1919. It first attracted attention by its call note, uttered repeatedly while the bird was

still some distance from the observer — a call note not at all like that of the House Wren. When located it was found to be in a gully at the bottom of a heavily wooded ravine. This gully was partially filled with fallen leaves and other rubbish; it had an overhanging edge caused by erosion and supported by the roots of trees, small sticks and broken branches. The bird was hopping about under this overhanging edge, making its way through the tangle of roots and sticks, apparently in search of food. It ceased to utter its call upon the closer approach of the observer. Occasionally, as it took note of the presence of the observer, it would perch on a root or twig close to the ground and remain quiet temporarily. It exhibited many of the characteristics and mannerisms of the Wren family. *Nannus hiemalis hiemalis* is distinguished from *Troglodytes aedon parkmani*, which is the species common here, by (1) its call note, already referred to; (2) its smaller size, one inch or more less than *parkmani;* (3) by the dusky line over the eye; (4) by its general darker coloring; (5) by its shorter tail, and (6) by its habitat. Its prevailing color is reddish or chestnut brown above, barred with dusky, while the throat, chest and under parts are a light wood-brown, speckled with buffy or dusky. The short, compact tail, slightly rounded at the end, is held erect. *Hiemalis* is a species of eastern distribution, but is found rarely breeding southward to northern Indiana and Illinois and central Iowa.

A. F. ALLEN.

Sioux City, Ia., Nov. 10, 1919.

A BANDED MALLARD

A female mallard which had been banded by the Massachusetts Fish and Game Commission was killed by a Norfolk, Neb., hunter, M. C. Fraser, on October 26, 1919. The bird was shot about twelve miles southeast of Norfolk, and was one of a number of wild ducks taken at the time. The wording on the leg band was as follows: "No. 350. Marshfield. Fish and Game Com. State House, Boston." Upon communicating with the commission, Mr. Fraser learned that this mallard, together with others, had been raised at the Massachusetts state hatchery at Marshfield. After being tagged, the birds were distributed over the state for liberation. The mallard taken by Mr. Fraser, it is apparent, joined the wild ducks in their flight northward and accompanied them on their autumn migration southward.

The mallard is one of the wild species of ducks which is easily domesticated. It is the practice among hunters in this locality, as it is in other localities, to rear mallards for use as live de-

coys. Ducks hatched from eggs taken from the wild mallard's nest and raised among the domestic ducks and chickens show few or no indications of wildness in their behavior. The second and succeeding generations are even less wild. As a precaution against flight, clipping of the wings frequently is resorted to, but instances are common of the birds making no attempt at flight even though the wings remain unclipped. At McCook lake, S. D., in the spring of 1919, wild ducks were decoyed into a farmer's dooryard by a flock of domesticated mallards and took their departure without any of the home grown birds accompanying them.

The incident of the Massachusetts mallard shows that under the proper conditions of temptation and environment the species hatched and reared in captivity will heed the call of the wild and return to the ways of its kind.

A. F. ALLEN.

Sioux City, Ia., Nov. 14, 1919.

ORDER PERMITTING THE KILLING OR TRAPPING OF CERTAIN BIRDS, AT FISH HATCHERIES, FOUND TO BE INJURIOUS TO VALUABLE FISH LIFE.

Information having been furnished the Secretary of Agriculture that grebes, loons, gulls and terns, mergansers and certain species of the heron have become, under extraordinary conditions, seriously injurious to and destructive of fishes at fish hatcheries in the United States and Alaska, and an investigation having been made to determine the nature and the extent of the injury complained of, and whether the birds alleged to be doing the damage should be killed, and, if so, during what times and by what means, and it having been determined by the Secretary of Agriculture that the birds above mentioned have become, under extraordinary conditions, seriously injurious to and destructive of fishes at fish hatcheries in the United States and Alaska, and that such birds found committing the damage should be destroyed:

Now, therefore, I, D. F. Houston, Secretary of Agriculture, pursuant to authority in me vested by the Migratory Bird Treaty Act of July 3, 1918, and agreeably to Regulation 10 of the Migratory Bird Treaty Act Regulations approved and proclaimed July 31, 1918, do hereby order that the owner or superintendent, or a bona fide employee of a public or private fish hatchery in the United States or in Alaska, for the purpose of protecting the fishes at such hatchery, may shoot or trap the following birds at any time on the grounds and waters of such hatchery:

Grebes (*Colymbidæ*), locally also called water-witches or helldivers.

Loons (*Gaviidæ*).

Gulls and Terns (*Laridæ*), the latter commonly also called sea swallows.

Mergansers (*Merginæ*), commonly also called sheldrakes or fish-ducks, and the following species of the heron family (*Ardeidæ*):

Bittern (*Botaurus lentiginosus*), locally also called shite-poke, stake-driver, thunder-pump, etc.

Great Blue Heron (*Ardea herodias*), locally also called blue crane, Poor Joe, cranky, etc.

Little Blue Heron (*Florida cærulea*), locally also called scoggins.

Green Heron (*Butorides virescens*), locally also called shitepoke, fly-up-the-creek, scouck, etc.

Black-crowned night-heron (*Nycticorax nycticorax naevius*), also known as gros bec, quawk, qua-bird, etc.

Every bird killed or trapped pursuant to the permission contained in this order, and every part thereof, including the plumage and feathers, shall be totally destroyed as promptly as possible, and shall not be possessed, transported or shipped in any manner outside of the grounds and waters of the hatchery where killed or trapped, except for the purpose of destruction as herein directed; *provided*, however, that such birds or parts thereof may be shipped or transported, as a gift but not for sale, to public museums and public scientific and educational institutions, and all packages containing such birds or parts thereof so shipped or transported shall be plainly and clearly marked so that the name and address of the shipper and the nature of the contents may be readily ascertained on an inspection of the outside thereof.

(Signed) D. F. HOUSTON,
Secretary of Agriculture.

October 24, 1919.

WHITE-WINGED CROSSBILL AT TOPEKA, KANS.

There have been an unusual number of American Crossbills here this winter, both on the campus of Washburn College, and along the wooded streams in this region. Probably associated with these, although not seen in the immediate vicinity of the flock, Mrs. Gunthorp was so fortunate as to observe a single male of the White-winged Crossbill (*Loxia leucoptera*) on the campus, about one hundred feet from the Ladies' dormitory in a cedar tree, on the afternoon of January 15, last, and on the following afternoon she saw both the male and female within a short distance of the place where the first observation was made, this time in a cedar tree also. Both days Mrs. Gunthorp studied them for some time through opera glasses and the male sang repeatedly. I know of

only two previous records for the state for this species, and Mr. Harry Harris* says there is only one authentic record for the Kansas City region, and suggests that "Students should be on the lookout for this bird, as we are well within its winter range."

Horace Gunthorp.

Topeka, Kans.

BIRD BANDING WORK BEING TAKEN OVER BY THE BIOLOGICAL SURVEY

The Bureau of Biological Survey of Washington, D. C., has taken over the work formerly carried on under the auspices of the Linnaean Society of New York by the American Bird Banding Association. In taking over this work the Bureau feels that it should express the debt that students of ornithology in this country owe to Mr. Howard H. Cleaves for the devotion and success with which he has conducted this investigation up to a point where it has outgrown the possibilities of his personal supervision.

Under plans now being formulated this work will give a great amount of invaluable information concerning the migration and distribution of North American birds which will be of direct service in the administration of the Migratory Bird Treaty Act, as well as of much general scientific interest.

It is desired to develop this work along two principal lines:—first, the trapping and banding of waterfowl, especially ducks and geese, on both their breeding and winter grounds; and secondly, the systematic trapping of land birds as initiated by Mr. S. Prentiss Baldwin the early results of which have been published by him in the Proceedings of the Linnaean Society of New York, No. 31, 1919, pp. 23-55. It is planned to enlist the interest and services of volunteer workers, who will undertake to operate and maintain trapping stations throughout the year, banding new birds and recording the data from those previously banded. The results from a series of stations thus operated will undoubtedly give new insight into migration routes; speed of travel during migration; longevity of species; affinity for the same nesting-site year after year; and, in addition, furnish a wealth of information relative to the behavior of the individual, heretofore impossible because of the difficulty of keeping one particular bird under observation.

The details of operation are now receiving close attention, and as soon as possible the issue of bands will be announced, with full information regarding the methods to be followed and the results expected. In the meantime, the Biological Survey will be glad to

* "Birds of the Kansas City Region." Trans. Acad. Sci. St. Louis, Vol. 23, p. 291. 1919.

receive communications from those sufficiently interested and satisfactorily located to engage in this work during their leisure time, for it is obvious that a considerable part must be done by volunteer operators. It is hoped that a sufficient number will take this up to insure the complete success of the project.

Very truly yours,

(Signed) E. W. NELSON,
Chief of Bureau.

BONAPARTE'S GULLS AND LOUISIANA HERONS CATCHING FISH

During a visit in Florida in early March, 1917, I was much interested in watching from the hotel piazza the Bonaparte's Gulls (*Larus philadelphia*) feeding in the Halifax River at Ormond Beach. The birds were said to frequent the vicinity of the hotel in order to feed on the garbage which was thrown into the water. But although this may attract them, they are by no means solely dependent on it, for I repeatedly saw a bird pursuing a school of small fish along the edge of the water, and in one or two instances made certain that it secured a living fish in its beak and swallowed it. The bird, flying just above the water, followed the fish and, on overtaking them, reached out and snapped up one, just after alighting, I think. Sometimes the bird swam after the school, and I could see the water move as the fish darted away, but even although the fish saw their pursuer, they were not always able to elude him. When the school swam out into deeper water, and presumably left the surface, the gull rose and flew along the shore until he sighted another school, when, again coming near the surface, he began to strike out at the fish.

The Louisiana Heron (*Hydranassa tricolor ruficollis*) adopted a similar method of catching fish,—also noted from the piazza of the hotel. The Heron walked slowly toward a school, with body leaning forward and head drawn partly back, and struck quickly, downward and outward. The proportion of successful strikes to failures was, during the short time I watched a bird fishing one afternoon, rather in favor of the fish.

It interested me to learn that these two birds were able to catch a fish which was startled and aware of the approach of its enemy. The skill of these birds must be remarkable,—they must possess the power of striking with great accuracy and with lightning-like speed—otherwise they would avail themselves of the advantage of attacking an unsuspecting prey, by waiting until the fish came within reach.

Lexington, Mass. WINSOR M. TYLER, M.D.

THE LEAST TERN IN COLORADO—A CORRECTION

This note is made necessary by the inclusion of the Colorado record of *Sterna a. antillarum* in Vol. VIII of Dr. Ridgway's monumental work on the "Birds of North and Middle America" (page 524).

In the Auk, Vol. XI, 1894, p. 182, Prof. W. W. Cooke recorded an example of this bird seen by him at Colorado Springs and "reported as having been taken near Fort Collins." But in his subsequent work, "The Birds of Colorado" (Bull. 37, Colo. Exper. Sta., Fort Collins, Colo., Mar. 1897) he personally repudiated the record in the following words: "Further investigation has convinced him (Prof. Cooke) that the specimen was secured outside of Colorado. There is now no certain record for this state."

What was true in 1897, is equally so today and there is no authentic record for the state. In fact the history of this record, as above given, has been accepted by all subsequent writers up to the present time and it seems probable that in compiling the distributional data for his latest work, Dr. Ridgway merely overlooked the correction and included the original note.

F. C. Lincoln.

September 22, 1919.

NOTES FROM LAKE COUNTY

Roseate Tern.—July 31, 1919, was made noteworthy by finding a single individual of this beautiful little Tern on the beach at the lake. I had made a wide detour in order to come in from the rear on a large flock of Sandpipers assembled on the beach; protecting my approach, after getting close by a sand ridge, but, being a little careless, they all took to wing and I was surprised to see a single Tern among them, which, unlike the Sandpipers, only made a short circling flight and then returned to the beach. Its snow-white breast and entirely black bill—I could not detect the change of color at the base—proclaimed it was a Roseate. I finally flushed it and made a further observation in that the wing tips in flight were very light in color, only a trifle darker than the rest of the upper wing surface. The bird alighted again, and this time near a convenient log, which, by crawling on my stomach and elbows I finally reached, and from over the top observed my bird at a distance of twenty feet or less. I have never seen it so stated, and the observation made on this individual may not be constant with Roseate in genral, but the bird's attitude when at rest was different, and more graceful, than that of the Common Tern. The last time I flushed the bird it uttered a few cries of a somewhat rasping quality, but entirely different and much softer than the usual call of the Common Tern.

MOCKINGBIRD.—By patiently waiting, September 14, 1919, after having seen a puzzling bird with white wing patches disappear into a swampy thicket, I was rewarded at last by seeing my first Mockingbird in Lake County. The place was alive with Catbirds, assembled mainly for migration, and I was kept busy turning my glass here and there at every new movement. Finally I caught a second glimpse, which started my identification of the bird on the right track by its gray and white color and long tail, and then suddenly, right before my eyes, he sat in a leafles dead thorn bush, contemplating me with a white lidded eye, and I don't know yet how he ever got there so easily and unobserved after all my alert and anxious peering into the depths of the thicket.

SURF SCOTER.—It so happened that the first Scoter I ever observed on Lake Erie is the rarest—the American Scoter; a fine adult male, closely seen November 4, 1917. That same fall I found the White-winged Scoter in numbers, and they were again observed in all plumages during the fall of 1918. The Surf Scoter eluded my search until October 19, 1919, when one winged by and dropped onto the bay formed by a breakwater and a pier. By walking to the end of the pier, while a small boy by chance headed the duck in my direction by running out on the breakwater, I was able to observe the bird at reasonably close range. It was in juvenile plumage. The two white spots on side of head, separated by a dark area, eliminated the juvenile of American Scoter, while of course the absence of white wing patches put the White-winged out of the question. Other details of bill and plumage also noted.

NELSON'S SPARROW.—To make a strictly satisfactory sight record of the Nelson Sparrow in northern Ohio is unusual enough in itself, but to make it on a breakwater one thousand feet or more out in the lake is rather startling at first thought, but when I say I have also found the Swamp Sparrow in the same place, and also such birds as Kinglets, Wrens, *Brown Creeper*, several Warblers, many of the Fringillidæ and other land birds it betters matters somewhat, but still needs explaining. This breakwater extends some six or seven hundred yards out into the lake. The middle third is planked over and was originally intended for a wharf, but now the planking is broken and decayed and in many places whole boards are missing. A filling of broken stones reaches up to within a foot or two of the planks, and the land birds are attracted there to feed upon the small moths and insects that abound there at times. It is hard to conjecture just how a Nelson's Sparrow or a Brown Creeper would *know* of this food supply so utterly out of their usual habitat, but nevertheless there they were. I intend some day to write an article on the "Bird Life of a Stone Breakwater," for

I have a list of nearly a hundred species I have found there, so will not go into further details now.

Sunday, October 26, 1919, as I walked out there a small sparrow flitted up out of a crack in the planking and then down out of sight again. He looked to be a stranger so I got as near as was safe and waited. The bird soon appeared again with a small yellow-brown moth in its bill, then down under again for another, keeping this up for as long as I cared to observe it. As I was only about fifteen feet away—frozen stiff of course—and as the bird would stand on a plank in full view for at least a minute at a time, every now and then, I was enabled to note his every characteristic mark. To begin with I called him (if *him* he was) the very prettiest little sparrow yet. Here is a field description, and any one who chooses may trace the identity as easily as I—providing they know practically all of the other sparrows for a starter: "Crown dark brown, with very distinct white or possibly light gray median stripe. Broad yellow buff stripe above eye. Grayish area about ear region, with buff below. A conspicuous white eye ring. Bill grayish. Nape feathers ashy, finely streaked with darker. Back striped with white and black on brown. Tail sharp. Breast and flanks a bright buff color indistinctly streaked with narrow dusky lines. Throat apparently light gray or white unstreaked. Belly clear white, contrasting oddly with buff of lower breast, flanks and under tail coverts. Feet and legs a peculiar tone—diluted red raspberry expresses it very well." Certainly a beautiful study in buff and brown set off by the contrasting median stripe, eye ring and back stripes. No one could mistake it after once seeing the bird well, for he wears a livery all his own as far as Ohio is concerned.

E. A. Doolittle.

Painesville, Ohio.

REVIEW

RIDGWAY'S BIRDS OF NORTH AND MIDDLE AMERICA. Part VIII.

This part of Ridgway's monumental work treats of the order *Charadriiformes*, the Limicolæ, Longipennes and Alcidæ of the A. O. U. check list. It is well up to the standard of the other parts of the work. Two typographical erros appear, on Plate II, where it reads Oedicnernus instead of Oedicnemus, and on Plate XXVIII, where it reads heerman instead of heermani. Errors in the citations are found on page 534, where the breeding place of the Black Tern is given as Cedar Point, Erie County, *Pennsylvania*—it should read Ohio—and likewise on page 642, where it reads, Licking *Reserve*, Ohio, instead of Licking *Reservoir*, Ohio. We should like to have seen a few more bibliographical references under some species, but the material is so voluminous that it is impossible to hunt up all the references and give them in full. We notice that Mr. Ridgway treats Tringa or rather Arquatella ptilocnemis and Uriaringvia as species proper, and we are in hearty sympathy with this statement, as expressed elsewhere, though on the other hand we think that Cepphus mandtii is only subspecifically distinct from grylle. One is surprised though to see that the U. S. Nat. Mus. has only seven specimens of Endomychura hypoleuca and only three of Craveri on hand. Surely a greater number of specimens should be in the Nat. Museum, and it seems to us could be secured with comparative ease if our government would be more willing to spend money for science. W. F. H.

MINUTES OF THE TWENTY-FIRST ANNUAL MEETING OF THE NEBRASKA ORNITHOLOGISTS' UNION.

The twenty-first annual meeting of the Nebraska Ornithologists Union was held at Lincoln, Nebraska, Friday and Saturday, May 14 and 15, 1920. The members and their guests assembled in the study collection room on the first floor of Bessey Hall at the University of Nebraska at 1:00 p. m. and spent the following hour and a half in examining study skins, especially of warblers, sparrows and flycatchers. At 2:30 p. m. removal was made to the Zoölogy Lecture Room on the second floor of the building to hear the program of papers.

The retiring President, Mr. C. A. Black, of Kearney, gave his address on "Bird Records and Glimpses of Bird Life in Western Nebraska," in which he summarized some of his most interesting and important records and observations. Following the President's address, Dr. R. H. Wolcott gave an account of the "Nebraska Flycatchers," illustrated with specimens in which he pointed out the best points for field identification, interpolating many personal observations on the habits of the birds of this family. Professor R. W. Dawson then presented a summary of the bird migration of the spring of 1920, to date, concluding his remarks with a general discussion of the lateness of many migrants this spring as compared with their average date of arrival, according to his data for the preceding ten springs. Professor M. H. Swenk concluded the program with a brief synopsis of the general habits of the Bohemian Waxwing, and an account of the influx of these birds into the state during the winter of 1919-20, and also an account of two nestings of the Red Crossbill in Nebraska in the spring of 1920, exhibiting the nest of the second record. About forty persons were present at the program.

At 4:00 p. m. the business of the meeting was taken up, with President C. A. Black in the chair. The reports of the officers were received and committees appointed. Messrs. R. W. Dawson and A. M. Brooking were appointed to audit the financial statement of the Secretary-Treasurer, while C. E. Mickel and Mrs. L. H. McKillip were appointed to act as a Nominating Committee.

While these committees were preparing their reports, the society proceeded with the election of new members, and Mrs. E. H. Polley, of Lincoln, Miss Mary St. Martin, of Wahoo, and Miss Lena Deweese, of Dawson, were formally elected to membership.

The Nominating Committee having reported, the following were elected as officers for 1920:

President—Dr. H. B. Lowry, Lincoln

Vice-President—Miss Blanche Garten, Lincoln

Secretary-Treasurer—Mr. M. H. Swenk, Lincoln

The report of the Auditing Committee was then received, in which it was stated that the accounts of the Treasurer had been found to be correct. Upon motion this report was accepted by the society. Prof. M. H. Swenk then reported for the committee appointed at the last meeting to investngate and report on the feasibility of the early publication of a new edition of the "Birds of Nebraska." The report of the committee recommended delay.

Mrs. A. E. Sheldon drew attention to the wording of Article 9 of the proposed Amendment 27 to the Constitution of the State of Nebraska, as adopted at the recent Constitutional Convention, pointing out that this amendment was even more unfavorable to forestation in the state than the existing law, under which forestation was decreasing, as it omitted exemption from taxation for improvements of fruit trees and groves, which were exempted under the present law. It was moved by Mrs. Sheldon and seconded by Dr. Wolcott that it be the sentiment of the N. O. U. that this amendment should not be adopted, and that the Secretary put in words the expressed sentiment of the Society and give publicity thereto. Carried.

Eleven members were present at this session of the N. O. U., as follows: Mesdames Blanche Garten, H. C. Johnson, L. H. McKillip and A. E. Sheldon, and Messrs. C. A. Black, A. M. Brooking, R. W. Dawson, H. B. Lowry, C. E. Mickel, M. H. Swenk and R. H. Wolcott

The session adjourned at 5:15 p m. after final arrangements for the field day on Saturday.

On Saturday, May 15, the eighteenth annual field day of the Union was held. The field party left Lincoln at 6:45 for Ashland, Nebraska, arriving there at 7:30 a. m. Division was then made into two parties, the larger one of which worked southeast along the C. B. & Q. railroad right of way bordering the Platte river to South Bend, a distance of eight miles, stopping occasionally to work back into the wooded ravines along the route, while the smaller party explored the ravines near Ashland at greater length, returning to Ashland instead of continuing to South Bend. Both parties reached Ashland at 4:30 p. m., from which place the members dispersed. The total list of the day included eighty birds, as follows:

Bluebird, Robin, Olive-backed Thrush, Gray-cheeked Thrush, Wood Thrush, Blue-gray Gnatcatcher, Long-tailed Chickadee, Tufted Titmouse, White-bellied Nuthatch, Long-billed Marsh Wren, Western House Wren, Carolina Wren, Brown Thrasher, Catbird, Redstart, Yellow-breasted Chat, Maryland Yellow-throat, Grinnell Water-Thrush, Oven-bird, Blackburnian Warbler, Black-poll Warbler, Magnolia Warbler, Myrtle Warbler, Yellow Warbler, Tennessee

Warbler, Orange-crowned Warbler, Black and White Warbler, Bell's Vireo, Yellow-throated Vireo, Warbling Vireo, Red-eyed Vireo, Rough-winged Swallow, Bank Swallow Tree Swallow, Barn Swallow, Cliff Swallow, Scarlet Tanager, Dickcissel, Indigo Bunting, Western Blue Grosbeak, Rose-breasted Grosbeak, Cardinal, Towhee, Lincoln Sparrow, Western Field Sparrow, Clay-colored Sparrow, Chipping Sparrow, Lark Sparrow, Western Grasshopper Sparrow, Pine Siskin, Goldfinch, Bronzed Grackle, Baltimore Oriole, Orchard Oriole, Meadowlark, Western Meadowlark, Red-winged Blackbird, Cowbird, Crow, Blue Jay, Thriall's Flycatcher, Wood Pewee, Phœbe, Great Crested Flycatcher, Kingbird, Ruby-throated Hummingbird, Chimney Swift, Northern Flicker, Red-headed Woodpecker, Downy Woodpecker, Hairy Woodpecker, Belted Kingfisher, Yellow-billed Cuckoo, Great Horned Owl, Red-tailed Hawk, Cooper Hawk, Western Mourning Dove, Killdeer, Spotted Sandpiper and Green Heron.

Two nests of the Lark Sparrow were found, one containing two eggs and an egg of the Cowbird, the other five eggs. A nesting pair of Blue-gray Gnatcatchers was also located.

REPORT OF THE TREASURER, 1919-20

RECEIPTS

Cash on hand, May 9, 1919	$ 37.60
Annual dues collected	112.00
Interest on investment	12.74
Sale of publications	2.35
	$164.69

EXPENDITURES

Wilson Bulletin	$ 66.00
Postage	4.30
Sign for Hastings meeting	1.00
Fund invested	49.50
Balance on hand, May 14, 1920	43.59
	$164.69

THE
WILSON BULLETIN
NO. 112
A QUARTERLY JOURNAL OF ORNITHOLOGY

VOL. XXXII SEPTEMBER, 1920 NO. 3

OLD SERIES VOL. XXXII. NEW SERIES VOL. XXVII.

SOME INTERESTING RECORDS OF NEBRASKA BIRDS FOR THE YEAR 1919

BY CLARENCE E. MICKEL AND RALPH W. DAWSON

The co-authors of this paper were very fortunate during the past year in securing interesting records of Nebraska birds. While many of these records were made on our field trips near Lincoln, we had exceptional opportunities during the year to secure notes on the birds of western and northern Nebraska. The most valuable data was obtained during the period from September 9 to September 20, during which time it was possible for us to make observations on the bird life in Monroe Canyon, Sioux county. This was especially opportune since so little data was available concerning the fall migration during this period in northwestern Nebraska, and we were rewarded by being able to secure notes on sixty-six species of birds, of which the following are new to the state list: Red-naped Sapsucker, Cassin Kingbird, Green-tailed Towhee and Western Robin.

Wherever the year's notes seem to add anything to the knowledge concerning abundance, migrations, or geographical distribution of the various species of Nebraska birds, they are here recorded.

1. *Gavia immer* (Brunnich)—Loon.

Mr. C. R. Snipes of Weeping Water, Neb., reported to us that he saw two loons, October 26, on an island in the Missouri River near Plattsmouth, Neb., and Mr. August Eiche reported that a

loon was brought to him, October 27, by a hunter, who had shot it near Lincoln. On October 30 Mr. L. R. Freadrich shot an adult male loon while hunting near Capital Beach. He generously gave it to Mr. Dawson, who made up the skin.

2. *Larus philadelphia* (Ord)— Bonaparte Gull.

On June 8 Mr. Dawson saw a Bonaparte Gull at Capital Beach. He was able to study it closely for some time. On July 19 we observed another individual of this species at Capital Beach.

3. *Sterna caspia* Pallas—Caspian Tern.

On August 1 we observed a single individual of this species at Capital Beach. The bird was flying low over the lake and remained in our vicinity for some time, so that we were able to study it carefully.

4. *Plegadis guarauna* (Linnaeus)—White-faced Glossy Ibis.

A juvenile specimen of an ibis was taken at Utica, Neb., on October 3 by Mr. Irvin Frey and was mounted by Mr. August Eiche. Since the Glossy Ibis and White-faced Glossy Ibis are not separable with certainty in their juvenile plumages, and since we have no definite records of the Glossy Ibis from Nebraska, the above specimen is referred to the form known to occur in the state.

5. *Ereuentes mauri* (Cubanis) —Western Sandpiper.

We found this sandpiper to be a common migrant during the fall migration of 1919. On July 13 we secured two adult females. We also have records of this species on July 17, 20 and 27, August 1, September 4, and October 12. These were always observed in flocks of Semipalmated and Least Sandpipers.

6. *Tryngites subruficollis* (Vieillot)—Buff-breasted Sandpiper.

On July 17 we saw a Buff-breasted Sandpiper near the water's edge at Capital Beach and were able to secure it. This is our earliest date for the appearance of this species during the fall migration in this vicinity. It may, perhaps, be an early date for the United States. We also have records on July 27 and September 2. It might be well to mention here that on September 17, 1916, Mr. Mickel saw two of these birds at Capital Beach and took them. This latter date is our latest fall record.

7. *Sphyrapicus varius nuchalis* Baird—Red-naped Sapsucker.

On September 13 we were tramping in Monroe Canyon, Sioux county, when we observed a woodpecker that was not familiar to us and upon securing the bird we found it to be a Red-naped Sapsucker. About one hundred yards from where we observed this bird we found a second one. The first specimen proved to be a juvenile male,, while the second was an adult male. On September 23 Mr. Mickel secured a third specimen, a juvenile male, in the woods along the White River, about five miles north of Chad-

ron, Neb. It is possible that this is a fairly common bird during migrations in northwest Nebraska.

8. *Tyrannus verticalis* Say—Arkansas Kingbird.

Our latest date in the fall for this bird in Sioux county is September 11. We were in the same general vicinity until September 20, but saw none of these birds after the above date. The Arkansas Kingbird is an abundant breeder in this region and was very common up until September 11.

9. *Tyrannus vociferus* Swainson—Cassin Kingbird.

On the supposition that the Cassin Kingbird should occur in western Nebraska a careful watch was kept for it during the season. We were therefore very much pleased. On September 9, while driving from Crawford to Harrison, to find a kingbird which appeared to be this species, and upon securing the bird we found our identification to be correct. The exact locality where this specimen was taken is three miles west of Glen. On September 12 a second specimen was collected at the mouth of Monroe Canyon. While returning to Crawford on September 20, by automobile, we observed a flock of eight or nine Cassin Kingbirds near Fort Robinson and a third specimen was obtained. It is probable that this species is a common migrant in Sioux county, at least in the fall.

10. *Nuttallornis borealis* (Swainson)—Olive-sided Flycatcher.

On June 8 Mr. Mickel found a pair of these flycatchers in a grove about two miles west of Kimball, Neb. The specimen taken proved to be a female.

11. *Pica pica hudsonia* (Sabine)—Magpie.

Mr. Mickel saw four Magpies near Gresham, Neb., on October 10. We think this worthy of mention since this species seems to be retreating westwardly and is now seldom observed in the eastern part of the state.

12. *Nucifraga columbiana* (Wilson)—Clarke Nutcracker.

While this species has been known to occur along the Pine Ridge in northwest Nebraska, only one specimen had been taken previous to 1919, that taken by Mr. J. T. Zimmer on November 29, 1910. On September 16 we observed and secured a Clarke Nutcracker at the mouth of Sowbelly Canyon, Sioux county. This is almost two and one-half months earlier than Zimmer's specimen. One was also observed in Monroe Canyon, Sioux county, September 18.

13. *Carpodacus cassini* Baird—Cassin Purple Finch.

On the morning of September 18, Mr. Dawson discovered a female of this species in Monroe Canyon, Sioux county, and we

were able to secure the specimen. This is the second record for the state, the first being made by Mr. J. T. Zimmer at Crawford, December 7, 1910, when he saw and collected two males.

14. *Carpodacus mexicanus frontalis* (Say)—House Finch.

A pair of these finches was found by Mr. Mickel on June 2 in the western part of Kimball county. While tramping over the pine bluffs there late in the afternoon a male was heard singing and shortly afterwards he was located in a pine tree along with the female. They are very shy, but after several attempts the male was collected. There is a specimen taken at Haigler, Neb., in the collection of Mr. A. M. Brooking at Hastings; and it has been reported by Dr. R. H. Wolcott from Bull Canyon in Banner county, but no specimens were taken at that place. It is probable that the House Finch breeds in the pine bluffs in the west part of Kimball county, but no evidence was secured to verify this supposition.

15. *Loxia curvirostra bendiri* Ridgway—Bendire Crossbill.

Crossbills were abundant at Lincoln during the fall of 1919, and appeared earlier than usual, a small flock being noted on October 19. Two specimens were collected from this flock and have been referred by us to the Bendire Crossbill. Although this form has not been authorized by the A. O. U. committee its recognition apparently brings out an interesting fact concerning the source of the Crossbill migration at Lincoln. The Crossbill, *L. c. minor*, is eastern and northern in its distribution, while the Bendire Crossbill is of western origin. We know that in some seasons true *minor* occurs at Lincoln, since several specimens of this form are in the collection of Mr. J. T. Zimmer. In other seasons, the present for example all of our crossbills appear to be *bendirei*. These facts would indicate that frequently our winter Crossbills come from the west, but sometimes from the east.

16. *Rhynchophanes mccowni* (Lawrence)—McCown Longspur.

On April 11 Mr. Mickel secured a male McCown Longspur at Capital Beach. It was in a large flock of Chestnut-collared Longspurs, but there were undoubtedly several McCown Longspurs in the flock, other than the one taken.

17. *Passerherbulus henslowi occidentalis* (Brewster)—Western Henslow Sparrow.

The Western Henslow Sparrow is recorded so seldom in the state that the following record is deemed worthy of mention: On April 26 Mr. Mickel discovered an individual of this species in some thick grass near the water's edge at Capital Beach, and was able to secure the bird for a specimen. This is the first record for the state for some years.

18. *Zonotrichia querula* (Nuttall)—Harris Sparrow.

The authors were much astonished, on the morning of July 20, when returning from a tramp near Lincoln, to see what was apparently a Harris Sparrow dart into some weeds at the side of the road. After pursuing the bird for some time it was located in a cornfield and taken. It was examined carefully, but showed no evidence of any injury that would interfere with its normal migration. Since the breeding range of this species is several hundred miles north of this locality we consider this record remarkable. The specimen was a male.

19. *Zonotrichia leucophrys* (Forster)—White-crowned Sparrow.

The White-crowned Sparrow has formerly been recorded as occurring only in the eastern portion of the state. On June 9 a male was taken at Kimball, Neb. A specimen was also secured in 1916 at Scottsbluff, Neb., on June 23. It is therefore probable that the White-crowned Sparrow occurs commonly over the whole state during migrations.

20. *Spizella pallida* (Swainson)—Clay-colored Sparrow.

The Clay-colored Sparrow is an abundant migrant over the whole state. However, our earliest Lincoln record for the fall migration has been September 23. This year, on August 21, Mr. Mickel took a Clay-colored Sparrow at Long Pine, Neb. On August 24 Mr. Dawson observed Clay-colored Sparrows at Kearney. They were seen also at Valentine on August 28 and 29, and at Lincoln on August 31. These records are mentioned here as interesting in the light of our previous information. The migration this year may have been a month earlier than usual or it may be that this species begins to move earlier than we had supposed.

21. *Junco hyemalis mearnsi* Ridgway—Pink-sided Junco.

On September 19 we secured a specimen of the Pink-sided Junco in Monroe Canyon, Sioux county. This species has been recorded before in the state by Mr. J. T. Zimmer, who collected specimens on November 29, December 3, and December 8, 1910, at Crawford, Neb. Our record is all of two months earlier than these dates and it is probable that Pink-sided Juncos may be found in Sioux and Dawes counties from September 19 on through the winter.

22. *Melospiza melodia melodia* (Wilson)—Song Sparrow.

Song Sparrows were observed by Mr. Mickel at O'Neill on August 19, at Meadville on August 23 and 24, and at Valentine on August 26, 27, 28 and 29. These dates are so early as to suggest that the individuals observed may have been breeding birds rather than migrants.

23. *Oreospiza chlorura* (Audubon)—Green-tailed Towhee.

On September 11, while the authors were "birding" in a small

grove near the Bad Lands at the mouth of Monroe Canyon, Sioux county, a Green-tailed Towhee came flying across the prairie and alighted in a tree not far from us. Mr. Dawson at once identified the bird as the Green-tailed Towhee, and since this species had not been seen in the state before, we hastened to secure the specimen. It has been thought probable for some little time that this species might be found in the western part of the state, but it was not until this specimen was secured that we were able to add this interesting bird to our state list.

24. *Piranga ludoviciana* (Wilson)—Western Tanager.

The following dates on the Western Tanager are so late in the fall that they are mentioned here. Western Tanagers were observed in Monroe Canyon, Sioux county, on September 10, 11 and 17, and at Chadron on September 25. The Western Tanager seems to remain considerably later in the fall in western Nebraska than the Scarlet Tanager does in eastern Nebraska.

25. *Piranga erythromelas* Vieillot—Scarlet Tanager.

On August 25 Mr. Mickel secured a male Scarlet Tanager at Meadville, Neb., in the woods along the Niobrara river. This bird was molting and presented a strange appearance in its intermediate plumage, with here and there splashes of scarlet.

26. *Bombycilla cedrorum* Vieillot—Cedar Waxwing.

On August 22 Mr. Mickel secured a juvenal male Cedar Waxwing at Meadville, Neb., in the woods along the Niobrara river. Adult Cedar Waxwings were observed in the same locality on August 24. The fact that a juvenile bird was present here in August may indicate that the Cedar Waxwings nest along the Niobrara river somewhere near this locality.

27. *Dendroica caerulescens caerulescens* (Gmelin)—Black-throated Blue Warbler.

There have been no records of this species in the state for a number of years, even in eastern Nebraska, where one would most expect to find it. We were quite surprised therefore, to find a Black-throated Blue Warbler on September 19 in Monroe Canyon, Sioux county. The specimen was taken to establish the record, which is of interest not only with reference to the Nebraska fauna, but also in relation to the western limits of the range of this species.

28. *Dendroica magnolia* (Wilson)—Magnolia Warbler.

This warbler is occasionally met with in eastern Nebraska, but has not been recorded before from western Nebraska. On September 12 we secured a female Magnolia Warbler in Monroe Canyon, Sioux county.

29. *Dendroica castanea* (Wilson)—Bay-breasted Warbler.

Records of this warbler in the state are so rare that observations of it are always worth mentioning. On the morning of May 13 Mr. Dawson observed a Bay-breasted Warbler in Wyuka cemetery at Lincoln. The notes on this and the three following species were made during an exceptional wave of warbler migration through this locality.

30. *Dendroica fusca* (Muller)—Blackburnian Warbler.

The Blackburnian Warbler is another bird rarely found in the state and which we were fortunate enough to see at Wyuka cemetery on the afternoon of May 12. This is the first published record of this species for Lincoln.

31. *Dendroica virens* (Gmelin)—Black-throated Green Warbler.

While this warbler is not so rare as the two mentioned above, records of it at Lincoln are always interesting. We observed a Black-throated Green Warbler on the University Farm campus at Lincoln on the afternoon of May 12. Mr. Mickel also saw this species north of Cedar Bluffs in the woods along the Platte river on May 11.

32. *Wilsonia canadensis* (Linnaeus)—Canada Warbler.

This warbler has been recorded but few times of late years. On May 18 Mr. Mickel secured a male Canada Warbler in the woods along the Platte river north of Cedar Bluffs. A second individual was seen by him on this same occasion.

33. *Anthus spraguei* (Audubon)—Sprague Pipit.

So few specimens of this species have been taken in the state that the securing of an additional specimen is of interest. On October 19 we observed a small flock of Sprague Pipits in a pasture a short distance north of Lincoln. One of them was taken for the record. Another specimen that might be noted here is one found dead, under some telegraph wires at Lincoln on April 22, 1909, by Mr. Dawson. He gave the specimen to Mr. J. T. Zimmer and it is now in his collection.

34. *Planesticus migratorius propinquus* (Ridgway)—Western Robin.

way).

Judging from our observations in Monroe Canyon during September of this year the Western Robin is the prevailing form in the Pine Ridge district of Sioux county. In fact, only a single specimen referable to the eastern form was noted during the ten days spent in the canyon, although robins were numerous and noted every day. A specimen collected September 11 is almost an exact counterpart of a specimen of the Western Robin taken in California by Professor Bruner. This is not the first definite record for the state, since specimens of this form were taken by Mr. J. T. Zimmer at Crawford in July, 1910.

NOTES ON THE BIRDS OF THE FORT LEAVENWORTH RESERVATION, KANSAS

BY DAVID C. HILTON, LINCOLN, NEBRASKA

Introduction.

While an Officer of the Medical Corps, United States Army, in charge of the surgical clinics of the Army Hospital and the Hospital of the United States Disciplinary Barracks, Fort Leavenworth, Kansas, covering the period of the spring migration, 1919, I made a casual check list of the birds observed and miscellaneous notes pertaining thereto. Hospital duties occupied at least the forenoon and the early afternoon each day. Bird observations were limited to an hour or more from time to time after four o'clock p. m., except for a very occasional stroll of a Sunday morning by prearrangement with the Commanding Officer, and of evenings when I would steal away from the haunts of man at dusk to receive in the depths of the woods the punctual and boisterious nocturnal greetings of numerous whippoorwills and to pursue a growing interest in the night life of nature by imposing myself as a sort of "officer of the day" over the night patrols in nature's population, the while meditating on the "home sweet home" of a volunteer medical officer.

The reservation at Fort Leavenworth, including that of the United States Disciplinary Barracks, comprises a few thousand acres of uplands and river-bottoms skirting the west bank of the Missouri river, above the city of Leavenworth, Kansas. The bottoms are low lying marshy flats, heavily timbered with cottonwoods, interspersed with elms, save only a portion that has been cleared and dyked for cultivation. The uplands in places abutting the river as bluffs, are checkered with open woods, broad meadows, copsy streamlets, dry hillsides, and fallow lands, dispersed

roundabout the major feature which is a great expanse of ridges and hills well forested with oak, hickory, elm, linden, ash, cottonwood, etc., and undergrowth — black haw, wild plum, red bud, seedlings, etc. The hilltop strata of shale and limestone issue seepage which assembles down the valleys in rills that foregather the waters into streamlets coursing to the great river.

The flats along the bottom are populated sparsely as to variety of species and only fairly well as to individuals. At mid-day they appear almost deserted, except for lovers of the ground such as juncos and song sparrows. On the river itself I seldom saw bird life. The open waters of ponds and "cut-off" lakes in the Missouri river-bottoms harbor water-fowls, but there are no lakes on the reservation.

The checkered uplands are well populated, and the watered valleys among the forested hills are "birdland" for certain — a bird lover's paradise. Here he may feast. Frequent rabbits, squirrels, groundhogs, harmless serpents, snails, insects and botanical curiosities especially fungi, make sauce for the feast. Thirsty mosquitoes try his appetite and classify him a full blooded devotee of Audubon or a weak sister only.

Annotated List

The subjoined list is arranged under consecutive dates. The first observation of a species is the only entry of it. Many species not identified with certainty, if they had been set down by guess, would well-nigh double the number recorded.

March 16, 1919

1. *Sturnella magna magna*—Meadowlark.

Meadowlarks are abundant and tuneful residents in the open meadows. They are all eastern meadowlarks. I have listened carefully from March to July and never once have heard a western meadowlark. Knowing that the latter species is not uncommon a few miles westward, I am struck by its absence from this vicinity.

2. *Planesticus migratorius migratorius*—Robin.

3. *Cyanocitta cristata cristata*—Blue Jay.
4. *Corvus brachyrhynchos brachyrhynchos*—Crow.
5. *Colaptes auratus luteus*—Northern Flicker.
6. *Centurus carolinus*—Red-bellied Woodpecker.
7. *Dryobates pubescens medianus*—Downy Woodpecker.
8. *Junco hyemalius hyemalis*—Slate-colored Junco.
9. *Pipilo erythrophthalmus erythrophthalmus*—Towhee.

Towhees are numerous residents and a fascinating part of the underbrush bird world, in song, in plumage and in hustling, bustling habits.

10. *Cardinalis cardinalis cardinalis*—Cardinal.

Cardinals are frequent residents and a delight to the eye and ear. I have always been impressed with the low visibility of the cardinal. It is scarcely more noticeable in the shaded woodlands than many dull-colored birds. This seems to be due to the fact that its red plumage has relatively low values. Difference in degrees of value may be quite as important as color contrast in determining visibility. The scarlet tanager shows red with high values, is more contrasty with the landscape, and more visible.

11. *Sayornis phœbe*—Phœbe.
12. *Penthestes atricapillus atricapillus*—Chickadee.
    Abundant resident.
13. *Bœolophus bicolor*—Tufted Titmouse.
    Abundant resident, musical and delightful to observe.
14. *Spizella monticola monticola*—Tree Sparrow.
15. *Lanius ludovicanus migrans*—Migrant Shrike.
16. *Sialia sialis sialis*—Bluebird.
17. *Melanerpes erythrocephalus*—Red-headed Woodpecker.
18. *Dryobates villosus villosus*—Hairy Woodpecker.

MARCH 19, 1919

19. *Colinus virginianus virginianus*—Bob-white.
    Occasional resident.
20. *Sitta canadensis*—Red-breasted Nuthatch.
    Observed three or four times.
21. *Colaptes cafer collaris*—Red-shafted Flicker.
    Observed in migration during a period of a week or two.

MARCH 20, 1919

22. *Euphagus carolinus*—Rusty Blackbird.
23. *Passerella iliaca iliaca*—Fox Sparrow.
    Observed in migration during a period of two or three weeks.
24. *Accipiter cooperi*—Cooper's Hawk.

MARCH 22, 1919

25. *Melospiza melodia melodia*—Song Sparrow.

Abundant and entertaining.

26. *Quiscalus quiscula æneus*—Bronzed Grackle.
27. *Dafila acuta*—Pintail Duck.
28. *Branta canadensis canadensis*—Canada Goose.
Observed once flying. About one hundred in the flock.

April 8, 1919

29. *Hylocichla guttata pallasi*—Hermit Thrush.
Frequently observed in migration during a period of about two weeks. Now the blue and yellow violets and the dutchman's breeches are coming into flower. The flower buds of the mandrakes are swelling fast.
30. *Regulus calendula calendula*—Ruby-crowned Kinglet.
31. *Loxia curvirostra minor*—American Crossbill.

April 10, 1919

32. *Polioptila cærulea cærulea*—Blue-gray Gnatcatcher.
33. *Mniotilta varia*—Black and White Warbler.

April 11, 1919

34. *Troglodytes aëdon parkmani*—Western House Wren.
35. *Sitta carolinensis carolinensis*—White-breasted Nuthatch.
36. *Bubo virginianus virginianus*—Great Horned Owl.
Owls of various kinds are common residents. Observation, however, is difficult.
37. *Cathartes aura septentrionalis*—Turkey Vulture.
Turkey vultures are frequent residents. As many as eight are seen in the air at once.
38. *Astragalinus tristis tristis*—Goldfinch.

April 12, 1919

39. *Molothrus ater ater*—Cowbird.
40. *Agelaius phœniceus phœniceus*—Red-winged Blackbird.
41. *Toxostoma rufum*—Brown Thrasher.
42. *Zonotrichia querula*—Harris' Sparrow.
Abundant during migration.
43. *Lanivireo solitarius solitarius*—Blue-headed Vireo.
44. *Spizella pallida*—Clay-colored Sparrow.
45. *Melospiza lincolni lincolni*—Lincoln's Sparrow.

April 16, 1919

46. *Chen cærulescens*—Blue Goose.
One flock of about sixty is seen flying high.
47. *Helodromas solitarius solitarius*—Solitary Sandpiper.
A solitary sandpiper is flushed from a nest in the edge of a

steep bank, four feet above a streamlet, in a forested valley. Four eggs in the nest, showing light brownish spots, are evidently not the eggs of this bird, and the presence of the sandpiper there remains a puzzle.

48. *Dendroica coronata*—Myrtle Warbler.

49. *Piranga erythromelas*—Scarlet Tanager.
Frequent residents, and beautifully conspicuous.

50. *Progne subis subis*—Purple Martin.
Numerous over the building of the military prison. Their sociable life of domestic activity and their freedom contrast sharply with the human prison-life within.

April 17, 1919

51. *Buteo borealis borealis*—Red-tailed Hawk.
A pair of red-tailed hawks are found nesting. The nest is about thirty feet from the ground in the top of a tree almost limbless and somewhat apart in an unfrequented section of the forested area.

April 18, 1919

52. *Accipiter velox*—Sharp-shinned Hawk.

April 22, 1919

53. *Zenaidura macroura carolinensis*—Mourning Dove.

54. *Chætura pelagica*—Chimney Swift.

55. *Zamelodia ludoviciana*—Rose-breasted Grosbeak.

May 4, 1919

56. *Zonotrichia albicollis*—White-throated Sparrow.

57. *Setophaga ruticilla*—Redstart.
Frequent resident.

58 *Hirundo erythrogastra*—Barn Swallow.

May 6, 1919

59. *Piranga rubra rubra*—Summer Tanager.
Not uncommon. Summer resident.

60. *Coccyzus erythrophthalmus*—Black-billed Cuckoo.
One or two observed.

61. *Antrostomus vociferus vociferus*—Whippoorwill.

May 19, 1919

62. *Icteria virens virens*—Yellow-breasted Chat.
Several resident pairs of these avian comedians observed in the forested area.

63. *Passerina cyanea*—Indigo Bunting.
Common resident in full song.

64. *Hylocichla aliciæ aliciæ*—Grey-cheeked Thrush.
65. *Myiarchus crinitus*—Crested Flycatcher.

May 22, 1919

66. *Hylocichla ustulata swainsoni*—Olive-backed Thrush.
67. *Wilsonia canadensis*—Canada Warbler.
One specimen observed well at close range and in good light.

May 26, 1919

68. *Butorides virescens virescens*—Green Heron.
69. *Coccyzus americanus americanus*—Yellow-billed Cuckoo.
70. *Thryothorus ludovicianus ludovicianus*—Carolina Wren.
71. *Oporornis formosus*—Kentucky Warbler.
Common resident.
72. *Dendroica chrysoparia*—Golden-cheeked Warbler.
One resident pair observed closely from time to time.

June 1, 1919

73. *Tyrannus tyrannus*—Kingbird.
74. *Empidonax minimus*—Least Flycatcher.
75. *Chondestes grammacus grammacus*—Lark Sparrow.

June 4, 1919

76. *Piranga ludoviciana*—Louisiana Tanager.
One summer-resident pair observed at close range and in good light off and on many times in a hillside woods.
77. *Vermivora pinus*—Blue-winged Warbler.
78. *Spizella pusilla pusilla*—Field Sparrow.
Numerous resident locally, in high, dry pastures.

June 7, 1919

79. *Helmitheros vermivorus*—Worm-eating Warbler.

Now on this hot, sultry afternoon, when bird life is silent and in seclusion, a change of fortune befalls an otherwise unprofitable journey. While I am negotiating the brush-wood of a steep hillside, I discover an unusual little bird—rather, it discovers me. It flies about from twig to twig, now far, now near, nervously, and calling with a commonplace "chip." I stand fast for at least fifteen minutes noting its unfamiliar markings and making a sketch. At times it alights four or five feet from me an instant, then away again, always calling. Close scrutiny for a nest is profitless. Its approaches are to my right. As I am about to advance, glancing downward, a little buffy, fuzzy object on a stem not six inches from my right hand is caught in the margin of vision. It suggests the appearance of a fluffy pussy willow-bud or a little discolored silk

of milkweed. Looking straight at it, there it is,—the tender, motionless baby-bird. I quickly leave the mother to her babe alone. I have seen the worm-eating warbler, and found her a summer resident of this locality.

80. *Spizella passerina passerina*—Chipping Sparrow.
81. *Spiza americana*—Dickcissel.
82. *Ceryle alcyon*—Belted Kingfisher.

Comparative Study

Comparison of my notes with the check lists and notes on the birds of Kansas cited in the List of References, discloses a few items of interest.

1. Birds listed as migrants in eastern Kansas.
   (a) Northern Flicker.
   (b) Red-breasted Nuthatch.
   (c) Hermit Thrush.
   (d) Blue Goose.
   (e) Black-billed Cuckoo.
   (f) Canada Warbler.
   (g) Worm-eating Warbler.
2. New records.
   (a) Louisiana Tanager. One summer-resident pair.
   (b) Golden-cheeked Warbler. One summer-resident pair.
   (c) Worm-eating Warbler as a summer-resident.

List of References

1. The Birds of Kansas.
   C. D. Bunker.
   The Kansas University Science Bulletin. Vol. VII, No. 5, June, 1913.
   Lawrence, Kansas.
2. Migration Records for Kansas Birds.
   Douthitt, Bessie Price.
   The Wilson Bulletin, Vol. XXX, No. 4, December, 1918. Vol. XXXI, No. 1, March, 1919. Vol. XXXI, No. 2, June, 1919.
   Oberlin, Ohio.
3. The Birds and Mammals of Nebraska.
   Swenk, Myron H.
   The University of Nebraska. Contributions from the Department of Entomology No. 23.
   Lincoln, Nebraska.
4. Color Key to North American Birds. Revised Edition, 1912.
   Chapman, Frank.
   D. Appleton & Co., New York City, N. Y.

WHIPPOORWILL CALLS

BY DAYTON STONER, STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA

Although something has been written concerning the vocal powers of the whippoorwill, general statements are the rule and definite facts and figures concerning time of calling, frequency of calls and other details are difficult to obtain. In looking up the available and rather widely scattered literature on the subject, a few statements purporting to throw some light on these questions were found. Some of them may be worth repeating here and will afford a brief historical background for the writer's own remarks.

Concerning the season of the year when the familiar calls of this bird are most frequently repeated Bendire says: "On their first arrival on the breeding grounds this call is especially frequently and rapidy repeated at the beginning of dusk and throughout the early part of the night, sometimes for minutes at a time, without any perceptible intermission . . . . As the breeding season advances they become more and more silent, but they sometimes sing as late as September, never with the vim and persistency, however, as on their first arrival when frequently half a dozen or more of these birds may be heard at the same time, forming a perfect chorus . . ." (Life Histories of North American Birds, II, 147–148).

Honeywill writes that in northern Minnesota the calls were heard nearly every night during July "but after the middle of August they were only heard occasionally." (Auk, XXVIII, 1911, 234). This observation is confirmed to some degree by Barrows in Michigan who makes the following statement: "On its arrival from the south the Whippoorwill begins to 'sing' almost at once and continues until the young are well grown but according to Bicknell the note is seldom heard after the middle of the year (last of June), although it is well known to sing in the autumn." (Michigan Bird Life, 374).

It is apparent that early observers noted some variation in the notes themselves and the frequency with which they were given. It has also been pointed out that the loudness and rapidity of the calls is more or less closely correlated with the time of day or night that the calls are given. On this point Alexander Wilson says: ". . . When two or more males meet, their whip-poor-will altercations become much more rapid and incessant, as if each were straining to overpower or silence the other. When near, you often hear an introductory *cluck* between the notes. . . . Towards midnight they generally become silent, unless in clear moonlight, when they are heard with little intermission till morning." (American Ornithology, V, 72).

Regarding the accents of the notes Nuttall writes: "The first and last syllables of this brief ditty receive the strongest emphasis, and, now and then, a sort of gutteral *cluck* is heard between the repetitions, but the whole phrase is uttered in a little more than a second of time." (Manual of Ornithology, I, 616). A further note concerning this peculiar "*cluck*" is given by Cheney: "An eccentric part of the Whippoorwill's musical performance is the introduction of a '*cluck*' immediately after each 'whip-poor-will'; so that the song is a regular, unbroken, rhythmical chain from beginning to end. One must be near the singer to hear the 'cluck': otherwise he will mark a rest in its place." (Auk. VIII, 1891, 34)

In commenting on the rapidity and persistence with which the calls are given, Baird, Brewer and Ridgway write: " . . . the cry is so rapidly enunciated and so incessantly repeated that a fertile imagination may give various interpretations to the sounds. They are never uttered when the bird is in motion, but usually at short intervals, when resting on a fence, or bush, or any other object near the ground." (North American Birds, II, 415).

Concerning the time at which the bird apparently prefers to call most frequently, Gentry says: " . . . Its

song is heard during the night, but measurably diminishes in frequency and intensity as the day begins to dawn." (Life-histories of the Birds of Eastern Pennsylvania, II, 90). Allison remarks more specifically along this line concerning the whippoorwill in Mississippi when he says: "The song generally commenced about seven o'clock on clear nights; and once I heard a whip-poor-will cry at five in the morning. I heard none at all in bad weather." (Auk, XXIV, 1907, 18).

The surprising vocal ability of this more or less elusive bird attracted the writer's attention while he was a member of the staff at the University of Michigan Biological Station during July and August of 1919. The Station is located on Douglas Lake in Cheboygan county, Michigan, about seventeen miles south of the Straits of Mackinac. The immediate region is more or less heavily wooded and few habitations are in close proximity to the Station. Owing to the fact that favorable haunts for the whippoorwill are abundant and conditions are suitable for rearing the young, considerable numbers of the birds remained continuously near our camp. Excellent opportunity was thereby afforded for securing definite data on the calls.

On several occasions counts were made of the number of consecutive calls given by one bird as well as the number of intervals and length of time occupied by each between the *series* of consecutive calls. The results are brought together in tabular form in this paper. In all cases counting was discontinued when the interval was excessively long or when we no longer could be sure that we were listening to the individual bird with which our counts started.

In our experience, the calls were invariably more frequent on warm, calm evenings. Scarcely any calls were given on windy nights. In the early part of July the birds began calling about 9:00 p. m. and it was a noteworthy fact that the calls started regularly within fifteen minutes of this hour. As the evenings became longer and dusk

settled earlier, the time at which the birds first called was advanced somewhat.

Professor Frank Smith of the University of Illinois who was present at the Station also became interested in the calls of this bird and in his experience the birds called more continuously in the early morning. On July 1 he counted 369 calls with but exceedingly brief intervals, so that for all practical purposes the calls may be considered as consecutive.

July 3, 9:00 P. M. The birds began to call shortly before this hour and the particular individual recorded here had given five or six calls before counting was begun. Our results on this bird were as follows: 57 calls; interval of about 10 seconds; 123 calls; interval very brief; 112 calls. Total, 294 calls with scarcely an interruption.

July 5, 9:00 P. M. 396 calls with but 3 intervals, the first two of which were of not more than 2 seconds each in duration while the third interval was of about 5 seconds' duration.

July 6, 9:00 P. M. 51 calls; interval; 167 calls; interval; 26 calls; interval; 10 calls; interval; 72 calls. Total, 326 calls with three intervals. No interval was of more than 5 seconds' duration. Counting was discontinued after an interval of more than 5 minutes. (Count by Mrs. Stoner).

July 12, 5:00 A. M. 51 calls; interval brief; 462 calls without the slightest intermission; interval brief; 47 calls; interval brief; 24 calls; interval brief; 126 calls. Total, 710 calls with 4 intervals of varying lengths but none of more than a few moments duration. The count was made by Professor Smith while the bird was perched on the top of his tent.

July 25, 8:15 P. M.,The calls of the whippoorwill are now becoming fewer, and less prolonged and are more irregularly given than those observed during the latter part of June and the first half of July. In addition, the intervals between calls are proportionately longer. The birds

began calling this evening at 8:15 which is at least a half hour earlier in the day than this performance began a week ago. The following count was made on one individual and is a fair example of others: 9 calls; interval 2½ minutes; 9 calls; interval 2½ minutes; 16 calls; interval brief; 4 calls; interval brief; 9 calls; interval longer; 4 calls; interval 1 minute; 7 calls; interval 2 minutes; 9 calls; interval short; 6 calls. Total, 66 calls.

August 2. The first call of the evening was noted at 8:35. But few calls were given after 9:00 p. m. 5 calls, slow; interval brief; 6 calls, slow; interval 1 minute; 6 calls, slow and irregular; interval 1 minute; 1 call; interval 3 minutes; 9 calls with brief interval between call 8 and 9; interval 3 minutes; 4 calls; interval brief; 6 calls, irregular; interval 2 minutes; 6 calls; interval 1½ minutes; 5 calls; interval 1 minute; 7 calls; interval 3 minutes; 4 calls; interval 4 minutes; 10 calls; interval 5 minutes; 4 calls. Total, 73 calls, the total time occupied by intervals between the calls amounting to about 25 minutes.

August 4. The calls began at 8:30 p. m. After 9:15 scarcely any calls were given. 4 calls; interval ½ minute; 5 calls; interval ½ minute; 2 calls; interval 5 minutes; 10 calls; interval 1 minute; 14 calls; interval ½ minute; 10 calls; interval 1 minute; 11 calls; interval ½ minute; 16 calls; (the preceding 5 *series* of calls were very irregularly given); interval 3 minutes; 14 calls. rapid; interval 4 minutes; 9 calls. Total, 95 calls.

August 5, 5:00 A. M. 240 calls, not more than 1 or 2 seconds' interval between any of them so that they were practically consecutive; 118 calls; interval brief; 50 calls; interval brief; 38 calls. Total, 446 calls. In no case was the interval more than 1 minute. (Record by Professor Smith.)

August 6, 4:25 A. M. 95 calls, very irregularly given; interval about 1 minute; 5 calls; interval momentary; 19 calls: interval momentary; 5 calls; interval 1 minute; 10 calls; interval ½ minute; 13 calls, very irregularly given;

interval 1 minute; 8 calls, very irregularly given. Total, 155 calls.

August 12, 8:25 P. M. Heard no calls before this hour. Evening still and moderately warm. 9 calls; interval 2 minutes; 12 calls, first 6 rapid, second 6 slow. Total, 21 calls. Other calls were not heard up to 9:25 p. m., either from this or any other bird.

August 15, 8:20 P. M. First calls given at this hour. Evening clear, cool, calm. 12 calls; interval ½ minute; 12 calls; interval ½ minute; 7 calls; interval ½ minute; 6 calls; interval ½ minute; 9 calls; interval ½ minute; 10 calls. Total, 56 calls.

August 15, 8:24 P. M. 7 calls; interval ½ minute; 3 calls; interval momentary; 34 calls, last 20 slow, irregular, labored; interval ½ minute; 19 calls; interval momentary; 10 calls; interval momentary; 14 calls; interval ½ minute; 4 calls; interval momentary; 8 calls; interval momentary; 2 calls; interval ½ minute; 4 calls; interval momentary; 13 calls, irregular, slow; interval momentary; 7 calls; interval 5 minutes; 7 calls. Total, 132 calls. Other calls of the species were not heard for 10 minutes.

August 16, 5:00 A. M. 10 calls; interval 2 minutes; 5 calls; interval ½ minute; 7 calls; interval ½ minute; 2 calls; interval 5 minutes; 9 calls. Total, 31 calls. The calls given at this time seemed to be a little more rapid and regular than those given in the evening.

TABULAR SUMMARY

Date	Time	Tot. No. calls	Tot. No. intervals	Remarks
July	1, 5:00 A. M.	369		Intervals brief
July	3, 9:00 P. M.	294	3	Intervals very short
July	5, 9:00 P. M.	396	3	Intervals very short
July	6, 9:00 P. M.	326	4	Intervals short
July	12, 5:00 A. M.	710	4	
July	25, 8:15 P. M.	66	8	Intervals longer
Aug.	2, 8:35 P. M.	73	12	Intervals very long
Aug.	4, 8:30 P. M.	95	9	Intervals irregular
Aug.	5, 5:00 A. M.	446	5	Intervals brief
Aug.	6, 4:25 A. M.	155	6	Intervals irregular
Aug.	12, 8:25 P. M.	21	1	
Aug.	15, 8:20 P. M.	56	5	Intervals short
Aug.	15, 8:24 P. M.	132	12	Intervals very irregular
Aug.	16, 5:00 A. M.	31	4	Intervals long, irregular

GENERAL SUMMARY

1. The average number of consecutive calls apparently diminished in direct proportion to the advancing season.

2. The hour at which the evening calls began also averaged earlier (by the clock) as the season advanced.

3. The calls were more *vociferous* and more rapidly given at the beginning of the season. In fact the calls sometimes were given so rapidly that it was difficult to count them.

4. The calls became more labored and irregular and the '*cluck*' more audible toward the end of the summer.

5. The length of interval between series of calls increased as the season advanced. Both the energy and the incentive for protracted calling were probably lacking toward the close of the breeding season.

BIRDS OBSERVED NEAR MINCO, CENTRAL OKLAHOMA — AN ADDITION.

In the Wilson Bulletin for 1918[1] in the numbers for March and June the writer published a short paper entitled "Birds Observed near Minco, Central Oklahoma," giving a synopsis of field observations made at that locality in 1905. This article, as originally written, and as it appeared when read in galley proof, covered a list of 62 species. For reasons unknown when the printer came to make up pages for the June number, the last four species (numbers 59 to 62) of this list were omitted. Later when he printed author's separates of this article the missing matter was discovered, put in at the proper place and then printed, while in addition the pagination and arrangement of the second installment were changed to make them consecutive with the first. This was not discovered until a short time ago.

In order to make current the additional information contained in the author's separate the four species omitted in the original are herewith reprinted as they should have appeared in the Volume for 1918, page 61.

[1] Wilson Bulletin, Vol. XXX, March, June, 1918, pp. 2-10, 56-61.

59. *Baeolophus bicolor*—Tufted Titmouse (Linnaeus).

A tolerably common breeding species. Two individuals were seen on May 25, others on May 26 and the days following.

60. *Penthestes carolinensis agilis*—Texan Chickadee (Sennett).

A common breeding bird. Individuals were seen daily from May 23 on. An immature bird, fully grown, was collected near Leal May 31, so that the birds breed early. This bird was known previously from Fort Reno[1] in this region.

61. *Polioptila caerulea caerulea*—Blue-gray Gnatcatcher (Linnaeus).

Tolerably common. Individuals were seen May 25 and 26 and I supposed that they were on their breeding grounds.

62. *Sialia sialis sialis*—Bluebird (Linnaeus).

Tolerably common; breeding. An immature male fully grown but in full juvenal plumage was collected near Minco May 26. Adults were seen elsewhere, but other broods of young were not noted.

ALEXANDER WETMORE.

[1] Ridgeway, Birds North and Middle America, III, 1904, p. 460.

General Notes

BOHEMIAN WAXWINGS AND CLARKE NUTCRACKERS IN NEBRASKA

The winter of 1919-20 was marked by an unusual abundance of Bohemian Waxwings (*Bombycilla garrula*) over the entire state of Nebraska. The first large flocks were noted in the Pine Ridge region of northwestern Nebraska early in November. On November 7, 1919, Mr. L. M. Gates noted large flocks of these birds in that region, where they were feeding on the cedar berries. During November these birds were noted in flocks of 75 to 100 among the evergreen trees in the cemetery at Fremont, Dodge county. At about the same time (November 2-23) a few birds put in an appearance at Wyuka cemetery at Lincoln, but large flocks were not noted until early in January. For approximately the month from January 8 on a flock of about 150 of these birds remained in Lincoln, feeding upon "apple mummies" in the orchards and upon various berries. About the middle of December large flocks of these birds began to be reported from various points in western Nebraska, they having come in following a severe snow and wind storm. They were reported from Trenton, Hitchcock county, Nebraska, as arriving about December 15 and remaining until early in January, feeding on the fruit of Russian olive trees and upon frozen crab apples hanging in the trees. Large flocks were reported as arriving at Gothenburg, Dawson county, on December 17, and feeding on the cedar berries. Other reports of flocks of these birds were received from Murdock, Cass county, Crete, Saline county, and Waco, York county. They even reached to Falls City, Richardson county, in extreme southeastern Nebraska, from where Mrs. Rosa Cleaver reported them present in large flocks for several weeks prior to the middle of February. Toward the end of Februrary the large flocks began to disappear from southeastern Nebraska, though on February 28 Mr. L. M. Gates noted a large flock near Chadron, from which locality they had been largely absent during January, evidently moving north. A flock of about 15 birds appeared on the University Farm campus on March 6 and continued there until March 9 feeding on the berries of *Viburnum opulus*.

Ordinarily, the Clarke Nutchacker (*Nucifraga columbiana*) is a rather rare fall and winter visitor in Nebraska, but during the fall and early winter of 1919 they were fairly common in the northern and western parts of the state. Professor C. E. Mickel collected one in Sowbelly Canyon, Sioux county, on September 16. On October 27, Mr. L. M. Gates noted them at Chadron, on the

eastern edge of the Pine Ridge. During November they appeared at Oshkosh, Garden county, and spread eastward along the Platte to Gothenburg, Dawson county, and Kearney, Buffalo county. A specimen taken at Kearney on November 18 is now in the A. M. Brooking collection. Mr. A. B. Colvin of Gothenburg writes, under date of December 8, that a few of these birds appeared there in the winter of 1918-19 also.

MYRON H. SWENK.

Lincoln, Nebraska.

FURTHER NOTES ON THE DECREASE OF THE CAROLINA WREN

In the Auk, No. 2, April, 1919, page 289, Mr. Alex. Whetmore has an article relating to the decrease of the Carolina Wren in his section.

I have also noticed this decrease in Virginia, a little further south of Washington, D. C. These birds, as a rule, are resident the year round, and are found in pairs around some farm, often as much in evidence in winter as in summer. I have attributed their decrease, not so much to hard winters, with snow on the ground, as to the "Swat-the-Fly" movement in the rural districts during the last ten years. These wrens, as well as the House Wrens, feed extensively about the house and farm buildings, and feed on flies, spiders and other insects found under porches, barns, cow stables and other farm buildings. The use of poisoned arsenical fly paper to kill off flies in the above mentioned farm buildings has resulted in the killing of countless numbers of flies. I do not think that the wrens ever drink the water from the shallow receptacles in which the sheets of poisoned paper are placed, but I have seen the wrens hopping around on the porches of my country home, picking up the dead flies, and on the ground also after the flies had been swept from the porch. I have also noted them engaged in similar feeding,—in the cow stable. After watching them extensively while thus engaged, I have noticed they became weak and wabbly in their movements, and I have been able to catch them by hand; and within a short time they have died. For a number of years this has been going on, and both the Carolina and House Wrens, especially the former, have become scarce in this section. Of course the House Wren migrates, generally by September 1st, and so escapes the multitude of dead flies killed in September, the height of their season. If snow is on the ground, Carolina Wrens are seen extensively around the farm buildings, looking over the cobwebs, in which old flies, spiders and other in-

sects are caught during the summer. I would suppose, however, that the pairs of wrens inhabiting the woods, and not coming near habitations, could readily secure insect food enough from hollow trees, brush piles, under sides of logs, etc., to carry them until a thaw came.

Harold H. Bailey.

Newport News, Va.,
March 27, 1920

In the Auk, October, 1919, No. 4, pages 574 and 575, Dr. A. H. Wright has two articles referring to birds seen in Virginia that call for further comment.

The colony of Henslows' Sparrow (and there are other colonies of these sparrows in Fairfax county, Va.) shown Dr. Wright near Alexandria, has been known with other colonies to actual "collectors," if I may use the term in place of ornithologists, for quite a number of years, and sets of eggs from those colonies have found their way into many of the large oological collections in the U. S. Dr. Wright does not say he actually found eggs or young of this species, southward of Fairfax county, though they may breed in Prince William county. Dr. Wright also fails to state that actual breeding records were seen or secured by Messrs. Harper and Holt in the vicinity of Camp Lee. If these two gentlemen can produce breeding records for that vicinity I shall be glad to learn of the southwestward extension of their breeding range; but until they do, I know of no colony in this state further southwest, of that in Prince William county. Non-breeding birds may, however, be found anywhere within "Tidewater" during that time.

Referring to the other article: While his reference (Wilson Bulletin) gives no information as to the year, number, page or author, I judge the article referred to is one of mine in the Wilson Bulletin of September, 1918, No. 3, page 91. On reading Dr. Wright's article one would infer that they were riding in an automobile; did not collect any specimens, and therefore nothing was done other than "seeing it—my first live Dickcissel"; and Dr. Knight hearing it. Will such a record from a moving auto stand the acid test? I do not say that possibly there has not been a Dickcissel in Virginia in twenty years, for in 1917 or 1918, while engaged in work for the U. S. Biological Survey, I also thought I heard and saw a Dickcissel. My train had come to stop on the siding,—to let another one pass. We were in the Clinch River Valley of Virginia, Scott county, and while leaning out of the open window the long forgotten song was heard and a fleeting glimpse of the bird seen. As I remember it, I mentioned the incident in my weekly report

to the Department; but to publish such information as a record and a fact would have been to join the ranks of the opera glass ornithologists, and so bring down upon my head the wrath of real collectors. What I would like to see is a real record of the Dickcissel in Virginia. No hard feelings, Doctor, as neither of us are ornithologists (though you unintentinoally used the word) according to the advanced code.

HAROLD H. BAILEY.

Newport News, Va.,
March 23, 1920.

NOTES FROM LAKE COUNTY

EARLY DATE OF DICKCISSEL.—Always rare in the county, I was pleasantly surprised on April 18 of this year to find a male bird singing his raspy *schreeee-schree, schree, schree, schree,* from the very top of a small tree; dropping to the ground to feed every now and then, but always mounting to the top of a bush or tree again to continue his song. Though not yet in *full* adult summer plumage all characteristics were noted as he fed close at hand on the ground. I believe it unusual to find one this far north at quite such an early date, and as an anomaly in migration comparisons will add that the same day a friend and I discovered a Whistling Swan on the open water of Mentor marsh, fully six weeks later than one would naturally look for this bird. It was not a wounded bird as it flew strongly when flushed. It stayed in the vicinity until the 22d.

LATE DATE OF BOHEMIAN WAXWING.—Lake county was not slighted the past winter when the county was visited by large numbers of these interesting wanderers. I first noted a flock of fully 75 birds on January 27, and on February 20 watched for some time a detachment of half a dozen feeding on frozen apples in an orchard. On May 11, while hunting Warblers, a single Waxwing flew from one cottonwood to another some distance away. The larger size and immediate louder call note told me it was a belated Bohemian, so I went out of my way to make a close observation. The rufous under tail coverts and the white and yellow base on the wings confirmed my first decision.

E. A. DOOLITTLE.

Painesville, Ohio.

A MAY EVENING GROSBEAK IN LAKE COUNTY

To Mr. Glenn Vesy belongs the right of discovery of this bird. He reported seeing a male of the species on May 18, and knowing he would not be liable to be mistaken I searched for it late that

afternoon, but failed to find it. The next day I easily "rediscovered" it, and found it to be as he said,—a male bird in high plumage of yellow, black and white. It was also present on the 20th. The locality was a dense growth of haw-thorns on a river flat, the same constituting one local Robin and Grackle nest. The Grackle was apparently feeding on the seeds of the dropped haw apples, being flushed each time from the ground beneath the canopy of boughs. Was very unafraid and would return after a short flight to its original feeding place.

E. A. Doolittle.

Painesville, Ohio.

SOME OF OUR GREAT WADING BIRDS

Our big wading birds of the marshes—the Cranes, Storks and Herons—are the majestic birds that artists of the Orient have for ages made so much of; the birds that American artists simulate far more than any others for decorative effects.

Some of these stand four or five feet high, wade in water two feet deep, and measure seven to eight feet from tip to tip of wings. The average person here sees one only occasionally, and then is delightfully enthused at having had such an opportunity. They are the æsthetic bird of the world.

The Big Blue Heron (there is a little Blue Heron) feed on frogs, fish, crustaceans, lizards, salamanders, mice, etc. They have a long, strong, sharp bill, and woe to anything in their line of food that gets within their reach.

This heron has been blacklisted by the Pennsylvania law—is not protected at any season. I consider this an error in judgment, and hope those of our people who go out with a gun will regard this bird in the same light I do. We can well afford to spare a few fish and frogs for the privilege of occasionally seeing one of these stately, magnificent fellows. They are unfit for food, and why snuff out their lives? Why ignominiously make of them meat for the maggots?

Scientific investigation is constantly bringing to light new facts regarding the food and habits of birds. As a consequence, some that a few years ago were protected are now outcasts, and vice versa.

Injustice is often worked by organizations of sportsmen, who insist on such laws as will bring most to their bag or creel, with no consideration for the ideally beautiful in nature. This insistence is too often allowed to outweigh the views or wishes of the masses, because but one side of the measure is pushed. The sport these advocates crave for is all right, and to be encouraged, but not

to the exclusion of other features just as desirable, and of more interest to the people at large.

The Egret of the southern states, the big wader that produces the plumes of commerce, called aigrettes, is fully protected by our state law, though to little or no purpose, for we seldom or never see one so far north. However, the principle involved is the same. It is a heron, and feeds on practically the same as our Great Blue Heron. The latter is much larger, stands more erect, and easily outclasses the Egret in general make-up and stylish appearance.

I ask for our Great Blue Heron as good treatment as is accorded to the white one. His habits are fully as exemplary as those of his paler relative, and Pennsylvanians are more interested in him. Unless better protected he will soon be too rare to be of much value as a show bird.

The protection of this heron involves, in a way, the same principle as that of maintaining a zoo, and at the same time saving a valuable bird from extermination at the hands of those who should be its protectors.

L. B. CUSHMAN.

North East, Pa.

THE ANNUAL MEETING

Members of the Wilson Ornithological Club will remember that at the last annual meeting held in St. Louis, it was voted to hold the 1920 annual meeting in Chicago, in connection with the meetings of the American Association for the Advancement of Science. The time at which these meetings have been held has been between Christmas and New Years Day. It is not yet possible to state the exact dates at which our meeting will be held, but members should hold themselves in readiness to attend the meeting during the week following Christmas day. The exact dates will be announced in ample time. Important questions of policy for the future of our organization are to be presented for discussion, questions of vital interest to every member. Therefore we ought to have a large attendance of members from widely different parts of our particular field. An interesting program is assured, but there is ample room for more titles of papers which may be presented at this meeting. Come prepared to take an active part.

PUBLICATIONS REVIEWED

The Ornithology of Chester County, Pennsylvania. By Frank L. Burns.

This little book of 122 pages, from the pen of Mr. Frank L. Burns, who has done so much work in this country and published so much about it, is a complete summary to the date of publication of what has been learned about the birds which have been found there. 247 species and subspecies are treated in the text, their status and times of migration given, and the breeding times of those which remain to breed are stated. 16 species are regarded as hypothetical. There are 26 resident species, 72 summer resident species, making 98 breeding species. There are 26 winter visitants, 75 transient visitants, 42 stragglers, and 6 have been extirpated. There are 21 half-tone plates, which add to the interest of this book. We note some typographical errors (what publication is free from them), but they do not detract from the value of the work. L. J.

Birds of Eastern Canada. By P. A. Taverner.

This is Memoir 104, No. 3, Biological Series, Geological Survey of Canada, Department of Mines. There are 221 pages of the text and 50 colored plates by F. C. Hennessey, illustrating 104 species. The index brings the number of pages up to 297. The quality of the colored plates shows that we have another successful artist in the field. Mr. Taverner has departed from the beaten paths in his presentation of the material of the list in a manner which seems to the reviewer worthy of study. In it the species are treated as the unit, with subspecies as variants from that unit. Whatever may be said about the inconvenience of this method, because it does not wholly conform to the 1910 edition of the Check-List of North American Birds, the fact that the species is actually the unit biologically can hardly be questioned. The exact variant is given, where any occurs, in a special paragraph, the heading of which is in display type. The argument for this method is that it avoids the prevalent tendency of these days to elevate a variant —subspecies—to the rank of a species. L. J.

Fig. 1.

Fig. 2.

Fig. 1—Cedar Waxwing

Fig. 2—Catbird at Nest

THE
WILSON BULLETIN
NO. 113
A QUARTERLY JOURNAL OF ORNITHOLOGY

VOL. XXXII DECEMBER, 1920 NO. 4

OLD SERIES VOL. XXXII. NEW SERIES VOL. XXVII.

BIRD NOTES FROM ITASCA COUNTY, MINNESOTA

BY ALVIN R. CAHN

Each passing year, with its opening of new country to homesteaders and tourists, makes it more and more difficult for the nature lover — the one who seeks the undisturbed wilderness — to find gratification for his longing. The passing years have witnessed the deforestation of much of northern Wisconsin and Michigan, and with the disappearance of the old trees has gone the animal life both big and small. The virgin forests of white pine are practically gone, razed either by the willful hand of man, or, through his carelessness, by fire. Whereas the last generation enjoyed this virgin wilderness, the present generation must content itself with isolated and protected areas, or with an occasional giant pine that has, somehow, withstood the ravages and accidents of Time. All of which is greatly to be regretted, the more so as much of the devastation could have been prevented. Each succeeding generation will have to content itself with less and less of the wilderness as it was, until eventually a time must come when, outside of national and state preserves, carefully policed and protected, but little deserving of the title of "wilderness" will remain.

To the zoölogist, northern Wisconsin and Michigan are still practically virgin soil, and there is much research work to be done in both states. Northern Minnesota is,

however, still a paradise practically untouched by the zoologist, and it is high time that some definite records be filed concerning the species found, and their abundance. With the constantly changing conditions which are met with in this area — fires, road construction, and the general advance of civilization — there must of necessity follow a constantly changing condition among the wild life of the region, to conform with the physiographic and topographic changes of the country. There will be some few new additions to the fauna as a result of these changes, but far outnumbering these will be the disappearance of species which are unable or unfitted to compete or associate with man. These changes are already going on. In the county visited the elk and caribou are gone; the moose is fast going; the beaver is nearly gone, as are the raccoon, the badger and the fox; the bear is very scarce. And this is just a beginning; these animals must go, and others must inevitably follow them closely. Among the birds the pileated woodpecker and the pin-tailed and spruce grouse will not long endure. It will not take many years to alter greatly the lists of birds and mammals of Itasca county.

During the summer of 1919, the writer had the opportunity of spending nearly five weeks in Itasca country, in northern Minnesota. This county lies in what may be termed the second tier of northern counties in that state, and includes within its boundaries 2,844 square miles, or 1,858,281 acres of territory, of which 128,768 acres are water. Few counties can offer such diversified surroundings. Towns, cities, great mining interests, lumbering, miles of wilderness, numberless lakes, extensive swamps, great rivers, mammals and birds in abundance, Itasca county stands unique in the writer's experience. Lake after lake, each set in its frame of wilderness without sign of human habitation; rolling hills from the summit of which one scans a panorama of great beauty encompassing pine-wood slopes, curling rivers and turquoise lakes; cold nights with the multitude of mysterious night sounds, and

the flickering aurora overhead, it is indeed a wonderland to any lover of the great outdoors. But into this wonderful country has crept that curse of the woods—fire—and great areas of fire-scarred country are, unfortunately, not infrequent. Scarcely a summer goes by without some serious damage in this large county, and more damage will continue to accrue year after year throughout the country as a whole just so long as the people realize that no one is punished for starting forest fires. A large percent of these fires is the result either of deliberate firing, or of carelessness, and either at this stage of the game, is criminal. But in the eyes of the world, a crime against posterity is no crime, because posterity can not prosecute, and so it would seem inevitable that useless devastation must go on.

Botanically, the region is of great interest. Of the evergreens, the white pine (*Pinus strobus*) is coming as a good second growth in many places, together with jack pines (*Pinus divaricata*), spruce (*Picea mariana*), and balsam (*Abies balsamea*). Tamarack (*Larix laricina*) are common in certain localities, and is the dominant species in many of the swamps. Of the hardwoods, the white birch (*Betula papyrifera*) and the aspen (*Populus tremuloides*), are perhaps the dominant species, with a goodly sprinkling of balm of Gilead (*Populus balsamifera candicans*) and yellow birch (*Betula lutea*). Of the smaller plants, the sphagnum bogs, or "muskeags" as they are more commonly called, abound in pitcher plants (*Sarracenia purpurea*) each with its own little biota. Great areas of blueberries (*Vaccinium corymbosum*) are abundant, and the yield of berries during the summer of 1919 was unparalleled. In the less dense portions of the woods, the bunchberry (*Cornus canadensis*) gives rich color to the ground, with a profuse scattering of wintergreen (*Gaultheria procumbens*), while in the shade, wherever there is suitable decaying wood may be found fine growths of Indian pipes (*Monotropa uniflora*). To one who seeks carefully

is revealed large numbers of that dainty woods-growing orchid, the lasser rattlesnake plantain (*Peramium repens*). Of wild flowers there is no end, and the open places simply glow with the purple of the wild asters, the red of the wild phlox (or "fire-weed," as it is called) and the yellow of wild sunflowers and golden-rod.

There is a certain phase of the wild life situation of Itasca county that deserves special mention. The water fowl situation is most peculiar, and forms a problem of considerable interest. The hundreds of lakes of the vicinity, varying in size from Lake Winnibigoshish down to the many small, nameless, sphagnum-bordered water-holes, many of them choked with wild rice (*Zizania palustris*), all of them abounding with food for ducks, should prove a veritable paradise for breeding ducks and other water birds. Yet, in spite of the fact that thirty-three or more of the larger and more important lakes, many nameless small lakes, two important rivers and many smaller streams were visited, with the exception only of loons and a very few mallards and black ducks, not one species of water bird was seen by the writer until August 18, when a single horned grebe was located. This was followed on August 22 by the finding of seven pied-billed grebes when the writer was on his way to the station. Conditions are such that there should be countless numbers of ducks in the region, and it is not long since many species bred within the county, but of late years, probably within the last six years —there has been a great decrease both in breeding species and migrating numbers, leaving the area practically duckless during the summer. This situation is rather difficult to explain, and it seems rather improbable that the departure could be due to the hunting, which in quantity surely could not be compared with the bombardment which greets the fall migration in Wisconsin year after year, without apparent effect on the migration route. For the benefit of those who will work over the territory covered

in this paper in later years, a list of the lakes visited is appended.

The writer's stay in Itasca county was made possible through the kindness of Dr. Sydney Kuh of Chicago, who has a cabin on Lake Minnewanka. The writer was his guest from July 18 to August 22. Every facility for studying the wild life was at hand, and over a thousand miles covered by machine assured the writer of fairly comprehensive data, and made possible the visiting of much territory otherwise inaccessible. To Dr. Kuh, therefore, and to his guide, Mr. George Dwigans, the writer expresses his appreciation for the opportunity of listing the 108 species of birds which follow.

1. Horned Grebe—*Colymbus auritus* Linn.

A single individual was found on August 18, in one of the very small, nameless lakes. There is no breeding evidence, though it is undoubtedly a summer resident.

2. Pied-billed Grebe—*Podilymbus podiceps* (Linn).

Not a single individual of this species was seen until the morning the writer left for home, when seven were seen feeding in a small pond along the road. Very common on migrations, and probably a breeding species to some extent.

3. Loon—*Gavia immer* (Brunn.)

An abundant breeding species. Practically every body of water, containing fish—whether dignified by a name or not—harbors a pair of loons, and its family. The larger lakes frequently have several pairs, though they keep separated as a rule. Interesting gatherings were frequently seen on several lakes, when as many as eight or nine adult birds would congregate, and with much calling and splashing of wings would apparently play together for as long as half an hour. Then one by one the birds would take wing, and return to their own lakes.

4. Herring Gull—*Larus argentatus* Pont.

An occasional summer visitor from either Lake Superior or the region to the north. Only two birds of this species were seen, both traveling toward the lake. More common in the early spring and fall.

5. Common Tern—*Sterna hirundo* Linn.

On a number of occasions these birds were seen, but only about the larger lakes. One bird in juvenile plumage was seen over Balsam Lake, indicating that the species breeds in the vicinity.

6. Black Tern—*Clidonias nigra surinamensis* Linn.

A common breeding species about all of the larger lakes. Found throughout the county on nearly every body of water, though never in large numbers. The remnants of recently used nests were found among the rushes near the shore. Food consists largely of the common minnow of the region, *Semotilus atromaculatus*, together with small perch, and pickerel up to two inches in length.

7. American Merganser—*Mergus americanus* (Cass.)

Common during the migrations, and from what information came to hand, probably formerly a breeding species. None was seen.

8. Red-breasted Merganser—*Mergus serrator* (Linn.)

Very likely a breeding species. Several individuals were reported by Mr. Dwigans in early August, and a pair is said to have bred at the south end of Lake Minnewanka. Formally more common. This is the common "fish duck" and "saw-bill" of the county.

9. Hooded Merganser—*Lophodytes cucullatus* (Linn.)

None of these birds was seen, but the described presence of a fish duck with a white triangle in its head makes it clear that the species is at least a migratory one.

10. Mallard—*Anas platyrhynchos* Linn.

A common breeding species. Breeds throughout the county about the less frequented lakes affording shelter and food. The abundance of wild rice (*Zizania palustris*) in certain of the shallower lakes and even along the edges of the deeper lakes, affords the necessary attraction. Marble Lake, nearly overgrown with rice, was the breeding ground of a considerable number. Heard frequently about Lake Minnewanka, to which they probably came from Marble Lake.

11. Black Duck—*Anas rubripes* Brewster.

Seen quite frequently, and usually in company with the mallards. Breeds along with them near Marble Lake, and frequents the wild rice and rushy, swampy shores of the undisturbed lakes. Food is at present in untold abundance, and it is altogether surprising that there are so few species of ducks breeding in the county, and so few pairs of those that do breed.

12. Baldplate—*Mareca americana* (Gmel.)

A migrant only, fairly common during both the spring and fall migrations.

13. Blue-winged Teal—*Querquedula discors* (Linn.)

Common as a migrant only. May still be a breeding species in some parts of the county, but none was seen. Strangely enough,

the writer could find no evidence of the presence of the green-winged teal, in spite of the number of hunters interviewed.

14. Shoveller—*Spatula clypeata* (Linn.)

Found only during the migrations, and then in not very great numbers. At Ely the writer found a mounted specimen of a full plumaged male, shot in Itasca county in the early fall (sometime during September) of 1917.

15. Pintail—*Dafila acuta* (Linn.)

Another species which is a migrant only. It seems likely that this duck bred within the county up to about five years ago, but the writer found no sign of its presence during his stay.

16. Wood Duck—*Aix sponsa* (Linn.)

A migrant only, so far as data at hand indicate. It is not unlikely, however, that the bird still breeds in some of the more heavily timbered regions. A mounted specimen at Ely, of a female in good plumage, was labeled "Itasca County, July, 1916."

17. Greater Bluebill—*Marila marila* (Linn.)

A migrant only, more common, apparently, in the fall than in the spring.

18. Lesser Bluebill—*Marila affinis* (Eyt.)

Probably by far the most abundant of the migrant ducks. Strangely enough, the hunters of the region distinguish very clearly between this and the foregoing species. It is possible that the species still breeds within the county, as it did formerly, but in small numbers. Known locally as "blackheads."

19. Golden-eye—*Clangula clangula americana* Bonap.

A migrant only, quite common for a short period of time on both migrations, and among the last to go in the fall and the first to return in the spring.

20. Bufflehead—*Charitonetta albeola* (Linn.)

A migrant only, and neither very common; not found in any considerable numbers. Known locally as the "butterball."

21. Canada Goose—*Branta canadensis canadensis* (Linn.)

Now a migrant only. Formerly a breeding species. With the opening up of the country, and the arrival of numerous homesteaders, the goose has been driven from its old breeding grounds in this county, as it has in most parts of Wisconsin and Michigan. Bred near Marble Lake as recently as the summer of 1915.

22. American Bittern—*Botaurus lentiginosus* (Montag.)

Quite a common breeding species in the low, swampy regions, but only in the more open—and consequently often the more settled—regions. Seen several times near the Prairie River and Lawrence Lake. A young bittern, but recently out of the nest, was seen from the machine on August 3d, as we drove over the bridge crossing one end of Long Lake.

23. Great Blue Heron—*Ardea herodias herodias* Linn.

A common breeding species; in fact, really abundant. Seen about the shores of nearly all the lakes, and on many of the rivers. One bird of this species was seen on probably twenty different occasions, at almost the exact same spot, fishing along the shores of the Prairie River. Another individual used to pay early morning visits to the spring-board at the end of the pier in Lake Minnewanka, where he had good fishing for frogs and small perch.

24. Virginia Rail—*Rallus virginianus* Linn.

A breeding species, though not very common, where conditions are suitable. Heard quite frequently, and seldom seen. Prefers the wet regions along small creeks and swamps about lakes.

25. Sora Rail—*Porzana carolina* (Linn.)

Apparently somewhat more common than the preceding species. Breeds in wet, open swamps. Several individuals were seen, usually along small streams. Sometimes spoken of as the "rice bird."

26. Coot—*Fulica americana* Gmel.

A very abundant migrant, and possibly a breeding species, though the writer found no evidence of breeding. Two seen on August 12 at the north end of Lake Minnewanka, feeding among the wild rice and arrod-head (*sagittaria* sps.). Known to breed within the county within the last six years.

27. Spotted Sandpiper—*Actitis macularia* (Linn.)

A common summer resident, and most likely a breeding species. Frequents the shores of the lakes and rivers, and is partial to those having either sandy shores or numerous "dead-heads," on which the birds delight to "teeter." The abundance of small aquatic insects of every sort affords plenty of food for the sandpipers, and it is surprising that this is the only species seen.

28. Killdeer—*Oxyechus vociferus* (Linn.)

A single individual of this species was heard flying overhead on August 10. The type of country is such as to be unattractive to the plover, except in such places where there has been a considerable amount of clearing and plowing. In such places the bird undoubtedly nests.

29. Spruce Grouse—*Canachites canadensis canace* (Linn.)

Formerly rather common within the county, the spruce partridge is all but exterminated, because of both hunters and the continuous forest fires, which have nearly ruined its haunts. Stays rather closely within heavy spruce or cedar swamps, and is anything but timid.

30. Ruffed Grouse—*Bonasa umbellus umbellus* (Linn.)

For a time nearly extinct in the county, the ruffed grouse is

now very apparently on the increase, and if the closed season could be held for another five years, the species would be out of danger. However, the continued protection has affected the birds in such a way that they have lost all their timidity, and they sit along the roadside and watch the automobiles go by, and permit one to alight and take their pictures! As a result of this boldness, when the period of the closed season expires, there is going to be sad slaughtering among the grouse, and probably 75% of the present stock will be exterminated the first week. After which time the species will again be in a desperate plight. It is not enough to protect our game by closed seasons: we must protect them by education of the hunters as well. A continuance of the closed season is urged.

31. Sharp-tailed Grouse—*Pediœcetes phasianellus phasianellus* (Linn.)

Occurs, probably as a breeding species, within the county, but is practically exterminated. A mounted male of the species, taken in Itasca county, was found in Ely, labeled "September 10, 1915." Known locally as the "pin-tailed grouse."

32. Turkey Vulture—*Cathartes aura septentrionalis* Wied.

Unless there is a decomposing carcass in the vicinity, the vulture is rarely seen. Yet, let an animal of any considerable size die, and within twenty-four hours the vultures have found him. Several were seen, soaring high overhead, drifting here and there aimlessly in the wind, in a way which only the vulture can. There is no evidence of the species breeding within the county, though it is possible that it does.

33. Marsh Hawk—*Circus hudsonius* (Linn.)

A common breeding species throughout the county. Seen often circling low over the wet swamps, where it was found to feed on snakes (*Thamnophis sirtalis*) and frogs (*Rana pipiens*).

34. Sharp-shinned Hawk—*Accipiter velox* (Wils.)

But two birds of this species were seen. One was in flight, the other perched on a dead tree, with the body of a white-throated sparrow in its claws.

35. Cooper's Hawk—*Accipiter cooperi* (Bonap.)

A single Cooper's hawk was seen, flying rapidly overhead, with the body of a small song bird of unknown identity, in its claws.

36. Red-tailed Hawk—*Buteo borealis borealis* (Gmel.)

Both heard and seen frequently. On July 30, a full plumaged bird was seen near Long Lake, which gave the party a fine view of its chestnut brown tail. The bird showed no timidity, and passed within fifty feet.

37. Red-shouldered Hawk—*Buteo lineatus lineatus* (Gmel.)

Somewhat more abundant than the preceding species, the red-shouldered hawk was numerous throughout the county. Both of these species are known locally as "chicken hawks," and are usually not differentiated. There is no breeding evidence for either species.

38. Bald Eagle—*Haliæetus leucocephalus leucocephalus* (Linn.)

A single specimen with the white head was found at Ely, taken in Itasca county on August 14, 1915. Eagles are not uncommon within the county, but it was the writer's luck not to have located the species. Whether or not the Golden eagle occurs is a question: the general opinion among the hunters seems to be that it does, but as there is no proof at hand, and as there is considerable room for confusion between the immature bald eagle and the golden, the latter is not listed.

39. Sparrow Hawk—*Falco sparverius sparverius* Linn.

About the region in which the writer lived, the sparrow hawk was never seen. However, on several trips which took him into more open country, this species was found to be abundant. In suitable locations—burned over lands, or clearings near homesteads—the sparrow hawk was the feature of the landscape, perched upon conspicuous dead limbs. Undoubtedly a breeding species.

40. Osprey—*Pandion haliaëtus carolinensis* (Gmel.)

A common breeding species. Three nests were found, all containing young. One near Cedar Lake, one near King Lake and one near Long Lake. The adult birds were seen constantly going to and from the nests, and early in August the young were seen sitting around the edge of the nest. By the middle of August the young were out, and were flying. Found looking for fish over nearly all the lakes at one time or another.

41. Barred Owl—*Strix varia varia* Barton.

Not seen, but heard on the nights of July 24, 29, 31 and often during August. No doubt a breeding species.

42. Great Gray Owl—*Scotiaptex nebulosa nebulosa* (Forst.)

A winter visitor only, and never common. A mounted specimen at Ely bears the inscription: "Itasca County, February 11, 1914."

43. Screech Owl—*Otus asio asio* (Linn.)

Heard on the night of August 1; this is the only evidence the writer has of the species. However, the hunters describe "a small owl with horns," which must be this species. No doubt breeds within the county.

44. Great Horned Owl—*Bubo virginianus virginianus* (Gmel.)

The commonest of the owls. Seen several times in broad daylight, both at rest and on the wing. Frequents the heavier timber, where it nests. Two young, recently out of the nest, were seen. Heard only occasionally.

45. Snowy Owl—*Nyctea nyctea* (Linn.)

A not uncommon winter resident, which freqently causes trouble by robbing rabbit snares and traps.

46. Yellow-billed Cuckoo—*Coccyzus americanus americanus* (Linn.)

A haunter of the hard-wood thickets, the cuckoo was seen only on two occasions, though its call was frequently heard during rambles through the woods. A nest, probably of this species (certainly a cuckoo's nest) was found, bearing signs of recent occupancy.

47. Kingfisher—*Ceryl alcyon* (Linn.)

One of the most abundant birds of the county. Seen everywhere—on every lake and every river and stream—always noisy, always fishing. The nesting holes of the kingfisher were found in nearly every sandy hill that afforded a suitable surface. With the birds so abundant, it seems likely that they take considerable toll of the fish, but there is no sign of a scarcity of fish because of its ravages. (Wisconsin take note!)

48. Hairy Woodpecker—*Dryobates villosus villosus* (Linn.)

Quite a common resident and breeding species. Seems to prefer the hard-woods to the evergreens, both for breeding purposes and for feeding.

49. Downy Woodpecker—*Dryobates pubescens medianus* (Swains.)

Somewhat more common than the hairy, the downy seems to be nearly as much at home among the evergreens as among the hard-woods, though the latter are chosen for the breeding locality, as a rule. Young only recently out of the nest were seen July 22.

50. Yellow-bellied Sapsucker—*Sphyrapicus varius varius* (Linn.)

The most common of the woodpeckers, by a considerable margin. The hard-woods—particularly the birches and maples—show abundant signs of the labors of this injurious species. Innumerable young were to be seen throughout the latter half of July.

51. Northern Pileated Woodpecker—*Phlœotomus pileatus abieticola* (Bangs.)

This large woodpecker was surprisingly in evidence throughout the writer's stay in the woods. Seen many times, scarcely a day passed without the drumming of the "cock-o'-the-woods" being heard. Shows a preference for the large stands of evergreens. The nesting holes were frequently found, and were unmistakable

because of their size. These usually occurred in evergreens—and usually in living trees—at a height varying between five to twenty-five feet.

52. Red-headed Woodpecker—*Melanerpes erythrocephalus* (Linn.)

A common summer resident at least, and a breeding species. Seen quite frequently in the burned-over areas where there is a good young stand of hard-woods. Seldom seen in the deep evergreen woods. Young birds were seen on two occasions, the first on July 19.

53. Northern Flicker—*Colaptes auratus luteus* Bangs.

Like the red-headed woodpecker, the flicker prefers the more open places to the deep woods, where it is practically never found. Young second growth hard-woods form the most attractive haunts for the species. A breeding species, and abundant; known locally as the "yellow-hammer."

54. Whippoorwill—*Antrostomus vociferus vociferus* (Wilson).

Although not seen, the whippoorwill occurs within the county, and its call is not infrequently heard. The finding of the bird would be a lucky accident, as it must be considered rare.

55. Nighthawk—*Chordeiles virginianus virginianus* (Gmel.)

Very abundant, and a breeding species. Active at nearly all hours of the day, they reach the height of their activity just at dusk, when they perform their aërial stunts. With jerky flight, they rise in a spiral course to a height of about two hundred feet, when they dive toward the earth in a sharp diagonal, bringing themselves to a halt just over the ground with a peculiar vibrating sound. This is caused by the vibration of the wings, as is easily seen at close range.

56. Chimney Swift—*Chætura pelagica* (Linn.)

In spite of the few places suitable for breeding, the chimney swift is fairly common, finding breeding sites in the chimney of all the homesteads. The pair which nested in the chimney of our cabin got the young out of the nest August 2. About the towns the birds are considerably more in evidence.

57. Ruby-throated Hummingbird—*Archilochus colubris* (Linn.)

Seen constantly in the flower garden near the cabin, where the birds frequented the tiger lilies and red dahlias. A lichen-covered nest belonging to the species was found on the ground one day after a bad windstorm. It was on a basswood (*Tilia americana*) limb, and was typical in every way.

58. Kingbird—*Tyrannus tyrannus* (Linn.)

By all odds the most abundant bird of the region, and the species which may be said to be characteristic of the county. Kingbirds are everywhere, except in the deep woods. They sit along

chasing crows, hawks and owls whenever they appear. The burned-over land is their favorite haunt, and here they sit perched on the point of a needle-like shaft, awaiting the appearance of insects. Breeds throughout the county, most often near the roads.

59. Phœbe—*Sayornis phœbe* (Lath.)

Both seen and heard frequently. A common breeding species, which is found most commonly in the hard-woods, where their mournful note is quite characteristic. Several old nests were found, including one evidently deserted and containing three eggs, which was found on a shelf near a broken window in an abandoned homestead.

60. Wood Pewee—*Myiochanes virens* (Linn.)

A common summer resident and breeding species. A pair had their nest under the eaves of the sleeping shack, and used to sit side by side on top of an upturned canoe near by, and watch us dress each morning.

61. Least Flycatcher—*Empidonax minimus* (Baird).

Seen and heard frequently near camp. During the third week of July one of these birds was seen carrying food, though neither the nest nor the young were ever discovered. Seem also to prefer hard-woods.

62. Blue Jay—*Cyanocitta cristata cristata* (Linn.)

A common resident, more abundant in the summer, however, than in the winter. There is probably a partial migration of the species southward. Breeds in hard-wood or evergreen woods alike, and nests were found in both. Very quiet during the breeding season; as soon as the young leave the nest they become loquacious, and grow more and more noisy as the season advances.

63. Canada Jay—*Perisoreus canadensis canadensis* (Linn.)

A single individual was seen near the southern border of the county on August 20. It is possible that this may be a breeding species, but it is far more common as a winter resident. During the winter the birds appear in considerable numbers, and live up to their reputation of daring and fearlessness by making themselves perfectly at home about the camp. Commonly known as the "Lumber Jack" and "Moose bird."

64. Crow—*Corvus brachyrhynchos brachyrhynchos*. Brehm.

Common in the more open places, where they congregate in considerable numbers. Rather wild and difficult to approach, and always on the lookout for intruders. A breeding species.

65. Raven—*Corvus corax principalis* Ridg.

Apparently a winter resident only, as no evidence of their presence was found, though the writer fully expected to find them

here as he did in northern Michigan.[1] Common during the winter months.

66. Cowbird—*Molothrus ater ater* (Bodd.)

A common summer resident and breeding species. Seen most frequently about homestead clearings and in the vicinity of towns. A female white-throated sparrow was seen feeding a young cowbird.

67. Red-winged Blackbird—*Agelaius phœniceus phœniceus* (Linn.)

Common wherever there are rushes and suitable conditions. Seen around nearly every river and lake. Young just out of the nest were seen on July 21, and another brood of young but recently out was seen as late as August 19, in spite of the fact that the species was already beginning to flock. Many old nests were found.

68. Meadowlark—*Sturnella magna magna* (Linn.)

As one might expect from the type of country, the meadowlark is seldom seen except in the cleared fields about homesteads and in the near vicinity of towns. Here, however, the species is reasonably common, and often heard. A breeding species.

69. Baltimore Oriole—*Icterus galbula* (Linn.)

Another bird that seeks the vicinity of dwellings because of the clearings. Seen but once in the hard-wood regions, but often seen and heard about clearings. Several old nests were found, mostly in elm and white birch.

70. Rusty Blackbird—*Euphagus carolinus* (Müll.)

About the commonest of the blackbird family, the rusty blackbird was seen almost daily. Usually found along the roads, and in the vicinity of clearing and burn-over areas. A common breeding species, which begins to flock shortly after the young are out of the nest. Large flocks were seen as early as August 8, but the number and size of the flocks steadily increased as the weeks wore on. Does no little damage, together with the next species, in the grain fields.

71. Bronzed Grackle—*Quiscalus quiscula æneus* (Ridgw.)

A common breeding species and summer resident. Begins to gather in quite large flocks early in August. Nests were seen in spruce and Norway pines only.

72. Evening Grosbeak—*Hesperiphona vespertina vespertina* (Coop.)

A breeding species. Seen several times in the immediate

[1] Cahn, Alvin R., Notes on the Vertebrate Fauna of Houghton and Iron Counties, Michigan. Trans. Wis. Acad. Sci., Arts and Letters, Vol. XIX, Part 1, p. 496.

vicinity of the cabin on Lake Minnewanka, where an entire family —parents and two young—were constantly attracted to a cherry tree (*Prunus pennsylvanica*). Here they were easily watched, and proved to be not the least timid. Their feeding habits deserve note: the ripe cherries were picked and the flesh removed from the seed by one bite and a little squeezing, and discarded. The seed was then cracked nearly in half—considerable pressure must have been required, for the "pop" could be heard a distance of one hundred feet—and the heart of the seed removed and eaten, the outer shell being discarded. The birds visited the same tree day after day, and had the ground fairly littered with the flesh and pit-hulls of the fruit.

73. Purple Finch—*Carpodacus purpureus purpureus* (Gmel.)

Seen only once, on August 5, when three individuals were located along the road. Possibly a breeding species within the county, but doubtful. More common as a migrant, particularly in the fall and early winter.

74. Goldfinch—*Astragalinus tristis tristis* (Linn.)

Common as a summer resident and breeding species. Begins nesting during the third week of July, when the birds were seen gathering nesting material. Young recently out of the nest were seen on August 16.

75. English Sparrow—*Passer domesticus* (Linn.)

Inevitable. Found, however, only in the vicinity of homesteads and towns, and never seen in the woods.

76. Vesper Sparrow—*Poœcetes gramineus gramineus* (Gmel.)

A very close second to the kingbird for the position of dominant bird of the clearings. Seen in great numbers along every roadside, where there is a clearing. A breeding species, with young out of the nest at least during the third week of July.

77. White-throated Sparrow—*Zonotrichia albicollis* (Gmel.)

This sparrow is, together with the above species, a close second to the kingbird for the position of dominant species in the burned-over area, and is the dominant bird of the underbrush. Seen and heard constantly in the above situations. A female and two young were seen on July 22.

78. Tree Sparrow—*Spizella monticola monticola* (Gmel.)

A single specimen of this species was seen, a male. The bird was sitting along the roadside, in full song, on July 22. Very likely more common than data indicate, and possibly a breeding species.

79. Chipping Sparrow—*Spizella passerina passerina* (Bech.)

A rather uncommon summer resident, and probably a breeding species, though there is no confirmatory evidence. Several were seen during the second week in August, and still more during the early part of the third week, while none was seen during July. Heard in song only once.

80. Junco—*Junco hyemalis hyemalis* (Linn.)

A common summer resident, and breeding species. Found usually near the roadside, or in the young bushes which are growover newly burned territory. On July 24, a junco was seen carrying food, but the nest could not be located in the brief time available for the search. Song not heard, though the lisping chirp was often in evidence.

81. Song Sparrow—*Melospiza melodia melodia* (Gmel.)

Until the writer got into northern Minnesota, he had seen very few song sparrows in 1919, the species being for some unknown reason very scarce in Illinois and southern Wisconsin during the spring and early summer. However, the numbers found in Itasca county were decidedly reassuring, as the song sparrow proved to be one of the most commen sparrow in the region. Found both in the woods and about the homesteads and towns. A common breeding species.

82. Chewink—*Pipilo erythropthalmus erythropthalmus* (Linn.)

Seen on a number of occasions, and once (on July 24) carrying food. Only a single male was seen, but probably a dozen or more females showed that the species is fairly common. Their secretive habits make it difficult to form a good idea of the abundance of the species.

83. Rose-breasted Grosbeak—*Zamelodia ludoviciana* (Linn.)

A pair of these birds visited the cherry tree one day at the same time that the evening grosbeaks were there, and while they too, discarded the flesh of the fruit, they did *not* crack the pit, but swallowed it entire. A breeding species, as proven by the finding of the two young birds on August 2.

84. Indigo Bunting—*Passerina cyanea* (Linn).

Seen but once, the indigo bird undoubtedly is more common than data indicate. The bird was heard in full song several times between August 8 and 12, near the cabin, and an old nest—presumably of this species—was found in a hazel bush within two feet of the ground.

85. Scarlet Tanager—*Piranga erythromelas* Vieill.

A not uncommon summer resident and breeding species. A pair and three young were seen on July 31, and these, with the

exception of a single full plumaged male, are the only records the writer has for the species.

86. Purple Martin—*Progne subis subis* (Linn.)

A common summer resident and breeding species. Every homestead has its martin house, and every house its full quota. Seen about nearly every house, and quite commonly in the towns. The birds began to flock the end of July, and departed during the night of August 10.

87. Barn Swallow—*Hirundo erythrogastra* Bodd.

Common about the towns and homesteads, where they nest whenever a suitable spot is found. Young out of the nest were seen on the wing on July 18.

88. Bank Swallow—*Riparia riparia* (Linn.)

Common wherever there is a place suitable for nesting. Colonies of fifty or more nests were seen in sand banks, with an occasional kingfisher nest mixed in with the swallow nests. These nesting places are usually along the roadsides, as the cuts made for the roads afford the most spacious nesting sites available. Young still in the nest as late as August 11 indicate a possible second brood.

89. Rough-winged Swallow—*Stelgidopteryx serripennis* (Aud.)

Not nearly as common as the preceding species, but found nesting along with them occasionally. Owing to the small amount of space available to bank-nesting birds, the possible places are generally pretty well crowded.

90. Cedar Waxwing—*Bombycilla cedrorum* Vieill.

Common during the summer, and a breeding species. Seen gathering nesting material in the swamps as early as July 22. Feeds commonly on the wild cherry (*Prunus pennsylvanica*), eating either the entire fruit, or sometimes only the flesh.

91. Red-eyed Vireo—*Vireosylva olivacea* (Linn.)

Heard in song during the entire stay in the woods, though but seldom seen. A female was seen feeding two young on August 17, indicating a second brood. The food in this case was the wild black cherry (*Prunus serotina*), and the female was having difficulties in poking entire cherries down the small throats. Several vireo nests were seen, all showing considerable use of birch bark in construction.

92. Black and White Warbler—*Mniotilta varia* (Linn.)

A spring and fall migrant only, apparently. Several birds of this species were seen on August 20, which date was the beginning of the fall warbler migration. Was found on the trunks of both hard-woods and evergreens, but seemed to prefer the former.

93. Nashville Warbler—*Vermivora rubricapilla rubricapilla* (Wilson)

Three were seen on August 20 and another on August 21. A migrant only.

94. Yellow Warbler—*Dendroica æstiva æstiva* (Gmel.)

Surprisingly few warblers of any species were seen, and the writer can offer no evidence of a single species breeding. The yellow warbler was not seen until August 20, when the fall migration began, and on that date only two were found.

95. Black-throated Green Warbler—*Dendroica virens* (Gmel.)

On August 21 the woods seemed fairly alive with birds of this species, but only for about two hours—between 10 a. m. and noon. Probably twenty were seen in that time, and many others heard. Later in the evening several more were heard. The writer regrets that he had to leave the woods just as the fall migration was getting well under way.

96. Maryland Yellow-throat—*Geothlypis trichas trichas* (Linn.)

Heard on August 8, and several seen after that. It is very likely that this warbler breeds in the county, but the writer did not prove it. Prefers the wet swamps where there is a considerable amount of young underbrush.

97. Catbird—*Dumetella carolinensis* (Linn.)

The writer was rather surprised to find so few birds of this species. Although seen and heard a number of times, the catbird was not one of the common species found. Young a few days out of the nest, but no longer attended by the parents, were seen on July 25.

98. Brown Thrasher—*Toxostoma rufum* (Linn.)

Quite a common breeding species, and considerably more in evidence than the preceding species. Found frequently in hardwood thickets, and but rarely in evergreen tangles. Perfectly silent, the brown thrasher proved shy and timid, even when one intruded around the nest.

99. House Wren—*Troglodytes aëdon aëdon* Vieill.

Like the purple martin, the house wren is to be found in the vicinity of every homestead, and about the gardens and yards in the towns. Seen occasionally in the woods, the bird is shy and disappears from view like a flash. The species was in song during July, but was seldom heard after August 5. Breeds commonly in any available spot about the buildings.

100. Long-billed Marsh Wren—*Telmatodytes palustris palustris* (Wilson).

A breeding species in the cat-tail swamps around the lakes and streams. Several old nests were found about Cedar Lake and

Rice Lake, and the species was both seen and heard constantly near the cabin on Lake Minnewanka. Very shy and secretive.

101. Brown Creeper—*Certhia familiaris americana* Bonap.

Little data is at hand concerning this unobtrusive little fellow. Although seen four times during July, there is no breeding evidence at hand. Shows a decided preference for hard-woods.

102. White-breasted Nuthatch—*Sitta carolinensis carolinensis* Lath.

A common resident and breeding species, though there seems to be somewhat of a fall migration of the species. More common, certainly, in the summer than in the winter. Heard often in both hard-wood and evergreen woods.

103. Red-breasted Nuthatch—*Sitta canadensis* Linn.

Nearly as common as the preceding species, the little red-breasted nuthatch was often heard about camp, and seemed to show a little preference for evergreen woods. There is no evidence concerning breeding.

104. Chickadee—*Penthestes atricapillus atricapillus* (Linn.)

Common during the summer and winter, and is a breeding species. A pair was seen with four youngsters just out of the nest on August 16. Heard in song during the entire stay in the woods, and the "dee-dee-dee" notes were the ones most often heard.

105. Ruby-crowned Kinglet—*Regulus calendula calendula* (Linn.)

A single male of this species was the only evidence of the presence of this little bird. On August 7 a male lit on the fence around the flower garden not ten feet from the writer, flashed his ruby crown several times, inspected him very carefully, and flew away.

106. Hermit Thrush—*Hylocichla guttata pallasi* (Cab.)

Heard in song twice, on July 18 and 30. Seen several times, but it is evident that the species is not very common within the areas visited. Stays strictly within the hard-wood thickets, and probably breeds there.

107. Robin—*Planesticus migratorius migratorius* (Linn.)

Common throughout the county. Seen in the burned-over areas in considerable numbers. A female was seen feeding her young on August 3. One gets quite a different conception of our everyday birds when met with miles away from any human habitation!

108. Bluebird—*Sialia sialis sialis* (Linn.)

Found, like the robin, but not as commonly, in the burned-over areas, where it nests in old woodpecker holes, usually in a charred needle-like pine shaft.

The following are the more important bodies of waters visited in Itasca county and immediate vicinity:

LAKES

1. Anderson
2. Ball Club
3. Balsam
4. Bass
5. Beaver
6. Big Rat
7. Brush Shanty
8. Burnside
9. Cass
10. Cedar
11. Crystal
12. Hill
13. King
14. Lawrence
15. Little Rat
16. Long
17. Marble
18. Mink
19. Minnewanka
20. Pike
21. Pokagama
22. Rice
23. Silver
24. Spring
25. Swan
26. Trout
27. Vermillion
28. Virginia
29. Wasson
30. Wheel-scraper
31. White Iron
32. White Swan
33. Winnibigoshish

RIVERS

1. Big Fork
2. Prairie
3. Mississippi
4. St. Louis

Zoölogical Laboratory,
Texas Agricultural and Mechanical College,
College Station, Texas.
October 20, 1919.

THE CARDINAL IN NORTH-CENTRAL IOWA.

BY HOWARD CLARK BROWN

One of the birds which has been followed with a great deal of interest by bird students of North-Central Iowa is the cardinal (*Cardinalis cardinalis cardinalis*). Within the past ten years there has been a rather strange Northern advance of this bird within the region with which this article deals. The reason for this advance no one can guess, but the advance is far more than a local phenomenon. As Miss Althea R. Sherman wrote, "In the past ten years there have been numerous accounts from the Atlantic seaboard and westward of the northern advance of the Cardinal." * And then she continues with the statement that "it appears that this northward movement has been all along the line of its range from northern Massachusetts to the Mississippi River." This report of Miss Sherman's was published in 1913. At that time, so far as I know, the cardinal had not been reported from North-Central Iowa at all. Three years later the first report for that region reached the Bird Bureau at Charles City, Iowa. And from 1916 up to the present date we have had a number of interesting records of the cardinal's appearance within our area.

When the Calif or Naturalist Club of Charles City, Iowa, first began keeping definite bird records, in the summer of 1914, not a single cardinal was reported from any member. We did not think it at all strange that the cardinal was not on our list. Why should we have expected him? We associated the Red Bird with that group which belonged to regions considerably south of our region. We knew that Southern Iowa claimed the cardinal as a resident. We knew that he came up both of the great rivers which bound our state, reaching far north of the boundary

* Sherman—Carolinian Avifauna in Northeastern Iowa—In The Auk, Vol. XXX, No. 1, P. 78.

which was his limit in the central portion of the state. Old settlers had never known the Red Bird. None of the bird students of the region had ever seen him at that time.

Carlen Rudy, in telling of the birds seen in the winter of 1918-19 at Ft. Madison, in Lee county, says, "On the morning of December 26, 1918, I observed several male cardinals and one female near Ft. Madison. On December 27, as I was on my way to Hillsbow, by train, I saw many cardinals in association with chickadees, juncoes, and titmice. The snow was quite deep and the temperature below zero. Four miles from Hillsbow, on a farm, I observed the cardinals daily until I left the place, on January 5, 1919. I also observed them near Salem in Henry county, during that same period. They were abundant during the entire time that I was there. The temperature ranged from zero to twenty below." The same record which is taken from the bird journal kept by Mr. Rudy states that the farmers of the region told him that the Red Birds came in the fall and remained throughout the winter. However, another observer of the same region told him that they were present in the summer also, though not so numerous.

The reason for the greater numbers in the winter might be that some which had summered further north came a little south for the winter, or simply that those which had nested in obscured places were not observed during the summer, whereas the openness of winter made them conspicuous. The first records of our north-central region have been such as to lead me to the belief that the cardinal, though a resident in most of his range, may be migratory to a slight extent in the very edge of it. The Ft. Madison region is far from the edge of the present range of this bird. But I think that the large numbers of individuals observed in that region in the dead of winter may be accounted for in the fact that there were some which were following migratory habits, though of very slight extent.

If data were available regarding the cardinal along all points of the Mississippi valley from the Ft. Madison region

to the region of New Albion, in North-eastern Iowa, a stimulating study might be made of the cardinal's habits. Since I have not been able to find such, however, I have merely picked up here and there notes which observers have sent to me. The notes are very fragmentary, and are too scattered to be of much scientific value. But such as I have been able to secure, I shall here present.

In Allamakee county, Miss Althea Sherman has made notable contributions to our knowledge of the cardinal. In a second article which she published regarding the cardinal in that region she says that the first one seen in that locality so far as she was able to find any records, was in November, 1906, when the late Senator Robert Glenn of Wyalusing, Wis., and his friend, Mr. H. W. Brown, of Lancaster, Wis., saw a male cardinal just north of the village of Wyalusing.* On December 11, 1906, Mrs. Mary E. Hatch saw one of the species in McGregor, Iowa. And in February, 1907, Senator Glenn again saw one. The next record from the McGregor region is the one which Miss Sherman can claim as her own. On April 17, 1908, two cardinals were seen by her on the banks of the Mississippi River, directly across from Wyalusing and six miles from her home. The slow advance of these birds up Sny Magill creek is a characteristic and interesting chapter in the story of the cardinal. In April, 1913, Miss Sherman said that she was told that nearly a dozen cardinals were seen by a farmer on a bluff near this creek. They had become resident on this farm at about this time. The first record which Miss Sherman gives of the cardinals as winter boarders, is that of Mrs. M. A. Jordan of McGregor, who had a cardinal at her bird table during the last week of December, 1908. This bird remained upwards of three months. After that winter the species came regularly. Mrs. M. A. Jordan is also quoted as having had the first nesting record of these birds, when two broods came from

* Sherman — Article on the cardinal in Wilson Bulletin — Sept., 1913, P. 150.

their nests in her yard, in the summer of 1913. Eight nesting pairs were located about McGregor that same season. Miss Sherman continues in a recent letter, as follows: "They are much more abundant now, nearly every yard with suitable shrubbery boasting a nesting pair of cardinals."

The same author says, "Its first appearance at Lansing, Iowa, was early in November, 1913, as reported to me by Miss Martha H. Hemenway (See Wilson Bulletin for Dec., 1913,—page 205). Several birds were seen by her. It took seven years for the cardinal to advance from the mouth of the Wisconsin River near Wyalusing up to Lansing, a distance of about thirty miles as the river flows."

Concerning the progress of the same species in Wisconsin, Miss Sherman says, "It was first reported from Wyalusing in November, 1906. Next reported from Blue River and Boscobel, Wis., in March, 1909. Following the course of the Kickapoo River to the farm of Lee Wanamaker a half mile north of Steuben, where they were fed in winter and seen almost daily throughout the year, dating from 1911. Farther up the Kickapoo at Gays Mills the first cardinal was seen in December, 1908, by Miss Ellen Hammond. A year later she saw a pair of these birds six miles north of Gays Mills. This carries the advance up the Kickapoo about thirty-two miles or to about the same latitude as Lansing has.

"It is said to be a habit of the cardinal to follow the course of rivers and smaller streams. This has been true in northeastern Iowa. Its progress along the lowlands of streams has been more rapid than westward of the Mississippi to the bleak prairie lands where it now is well established." * This record is certainly one which is a good basis for further study. And now let us turn to the reports of Mr. Charles A. Russell, formerly of Harpers Ferry, Iowa.

---

* Sherman — Wilson Bulletin — Sept., 1913.

On January 16, 1916, Mr. Russell wrote, "The bird visitors at our 'Free Lunch Counter' today included a pair of hairy woodpeckers, a pair of downy woodpeckers, a pair of white breasted nuthatches, a pair of jays, a dozen juncoes, a dozen chickadees, the usual number of sparrows, and a pair of cardinals." He continues, "I was at New Albin yesterday afternoon and a man told me that he had recently seen a pair there." Harper's Ferry is more than a dozen miles north of McGregor, and New Albin is fully twenty-five miles north of Harpers Ferry, by river route. On March 5, 1916, Mr. Russell writes, "Our usual number of boarders stay with us. Our cardinal is beginning to sing now."

In a letter of March 11, 1917, the same observer says, "We have kept a lunch counter all winter and had a large number of regular boarders." In listing the regulars for that winter he includes one pair of cardinals. He continues, "The cardinals are pretty shy and keep at a safe distance. I saw two pair of them at Waukon Junction this winter. They have been reported from New Albion." In the same report Mr. Russell tells of red winged blackbirds which he had seen that week and which he thought had spent the winter on the islands of the Mississippi. The river at that time was frozen. The red wings, I believe, were far north of their usual winter range if they had actually spent the winter there. He also mentions the red headed woodpecker as sometimes remaining with them. The red head was not discovered as a winter resident in our north-central region until the winter of 1917. But since that year, we have had no record at all, during the winter season.

One would expect that the birds would follow the river valleys, going much farther north for winter ranges in the valleys than on the plains, for the valleys furnish plenty of seed for the seed eaters, and considerable protection from drifts, from cold winds, and from freezing temperatures. As the southern plants make their ways up the

river valleys, so it may be that the birds also follow. On December 25, 1917, Mr. Russell wrote from Harpers Ferry, "Our cardinals are again with us this winter but other birds seen very scarce." It appears from this, that once established in a given area, the cardinal tends to maintain itself. The last report from Mr. Russell as regards cardinals, was in a letter of March 23, 1918, in which he says, "On a walk to Waukon Junction, yesterday, I saw six pairs of cardinals." As one reads such records as these he can not help but wonder how much farther north the Red Bird will go. He has apparently reached the very northern limit of our state along its eastern border. And now for the record of the inland.

Quoting from a letter from Miss Sherman, again, "Mrs. Ida Hobson Pike, a daughter of Judge H. N. Hobson, has written me of the coming of the cardinal to West Union. The first one was seen in the woods near West Union in November, 1915. In a few days one appeared at the feeding table of Mrs. Pike. He came every day until spring. In November, 1916, he reappeared. Soon his dead body was found on the snow in a nearby wood, apparently the victim of a bird of prey. Others came. Two years later she was feeding four pairs at one time."

The cardinals in reaching West Union probably followed the Turkey River to Elgin, then gradually worked westward, following that branch of the Turkey which goes through West Union. And at the same time that they were working north and west along those streams, they were apparently working north along the Cedar river, and west along the Upper Iowa. They probably worked westward from some such place as New Albin, following the Upper Iowa, for it was not until 1917 that it was seen at Decorah, Iowa. Mr. A. F. Porter writes of the species, "It appeared here (Decorah) about three years ago, and has since become more and more plentiful in this locality each year but it is not a common species. It winters here and I have seen it here this winter (1919-20), and every

winter for the past three years. The male is certainly a beauty and I hope it will continue to make its home with us."

Osage, Iowa, in Mitchell county, and almost the exact latitude of Decorah, did not report cardinals until July, 1918. It was on a far more direct route, being on the Cedar River which flows quite directly north in that region, but the fact that Decorah is nearer the great stream from which the cardinal wave seems to first have spread, seems to have caused the later arrival in the interior. However, the directness of the route did have some influence, for Charles City, in Floyd county, and only twenty miles by road, almost directly south of Osage, had some reports of cardinals which antedated the Osage reports by a couple of years. The river way would add considerable in mileage to the distance between these two places. But it would not seem that it could possibly add enough to account for the difference in dates, especially when one considers other problems regarding the bird's appearance here.

When Master Harold Fredrickson, President of the Toksali Nature Study Club, of Charles City, first reported that he had seen a cardinal, on Burroughs Day, April 3, 1916, the naturalists of Charles City were tempted to doubt his vision. The report was given by the two boys, Harold Fredrickson, and Leslie Kober. The bird had been seen in Wildwood Park. That is a tract of woodland just at the edge of Charles City, and would have been one of the most likely places for such birds that we knew. But cardinals had never been seen in our region and we wondered if we dared credit it on our club list. We experienced that strange uneasiness which naturalists always feel when things "'aint just as they ough'to be."

A year went by and we did not report the birds on our year's list. In 1917, however, early in the summer, reports came from some boys on the south side of the river, that they had seen a cardinal in the trees of their yard. The description was asked for and was given with consid-

erable definiteness. An all-red bird with black chin and a red crest. Then, on July 4, 1917, Mr. C. L. Fenton, who was then president of the Califor Naturalist Club, reached my home much out of breath. "Get ready at once and come along with me!" was his command. Naturally, I wondered the reason for the excitement. When I questioned him, he only said, "Don't stop to argue. Come on!" When well on our way toward Wildwood Park he said, "I just left here this morning, just before coming to your place. I saw a cardinal."

It was very amusing to me, for Mr. Fenton had been one of the strongest opponents to the record of the year previous. I tried to convince him that he had seen "crooked," but he would not be convinced and the cardinal went down on his annual list that year. It was the second definite record for our region; this is, the second record given by trained observers.

I did not see the cardinal that year, as it had apparently left the region in which Mr. Fenton had seen it soon after his departure. At any rate, it was not to be seen in that wood when we arrived.

The latest report of the cardinal for Charles City, was on January 3, of this year, (1920), when a pair was observed near the home of Mr. Clement L. Webster. Mr. Webster's home is only a few rods from the edge of the Cedar River; and it was there, in an orchard that Mr. Webster first discovered the pair. Regarding the discovery of this pair, Mrs. Mary A. Dutton, Bird Bureau Recorder of the local Naturalist Club, wrote, "I had the joy of my life Saturday morning. What was it? Oh, it was a genuine thriller! Only nature lovers can imagine what it means. We were very busy when a phone call interrupted our work. Mr. Webster announced that there was a pair of cardinals in his apple trees. It was bitter cold, snow deep, and walks icy, but I started with another club member, Master John Burns, for the orchard, which had been mentioned. Work or no work, I speedily made my

escape, field glasses in hand. When we reached Mr. Webster's place we were told that the birds had gone on down to the river. And so we went after them. And there on the river bank, there, to my joy and delight sat Mr. Cardinal on a three foot weed stem, eating seed. His crest was very erect, and his constant peep reminded me of a chickadee when hunting on the bark of a tree, save that it was louder and more penetrating. Mrs. Cardinal was cold, apparently, for she was fluffed out, perched in the fork of a tree."

Concerning the coming of the cardinal to Osage, Iowa, in Mitchell county, and about twenty miles north of Charles City, Mrs. Flora May Tuttle says. "The cardinal has been seen in July of 1918, and quite often after that, throughout the year of 1918-1919, in the north-east, south-east, and south-west corners of Osage." I can not believe that the cardinal was very common, however, for this naturalist would not have missed it for so long a period. She says concerning her own observation of the bird, "I was coming home from a meeting of the Naturalist Club (Osega Naturalist Club), March 20, 1919, where I had told the members that the cardinal had been seen several times since January 4, at the Nursery; when just as I got within twenty feet of the house I heard a strange bird note. And looking up, not more than eight feet above my head, on a branch of a hard maple sat my first cardinal for Mitchell county."

From Elma, which is between Osage and Charles City in latitude, but some twenty miles or more west of Osage. in Howard county, Mrs. H. L. Spaulding reported cardinals to the Bird Bureau of the Charles City Club. Her report follows: "The cardinal was seen in a thicket near the creek, in town (Elma) during May, 1919, by Miss Lois Pickering. It remained all summer. I saw it several times during the summer, in the door-yard of one of my neighbors. The mate was always along, and they flew only when I approached nearer than ten or fifteen feet. The birds were seen Christmas Day and frequently since by

Professor and Mrs. Plopper, in the same locality." The route by which the cardinal reached Elma was probably by way of the Wapsipinican River. The fact that he reached there at the same time as he reached Charles City, as a winter resident, is rather interesting. Of course birds had been reported before in both these places, in the summer. But the first report of their being found as winter residents was during the same winter. I imagine that the cardinal will eventually become a resident with us in much the same manner in which it has become so in the north-eastern part of our state, or in the north-western. How long it will take for them to become other than a rarity in our bird reports, we can hardly estimate. Perhaps a couple of years will do that. I am tempted to think that some of the Osage reports are not as reliable as they should be. The Osage plant woman, Mrs. Tuttle, knows her business, but some of the other reports may possibly have held errors. Otherwise, I can not understand why the cardinal should have appeared there in greater numbers, earlier than he appeared at Charles City. Of course it is conceivable that they, for some reason, have skipped the territory about Charles City. However, the weed seed possibilities are the same at Charles City as at Osage, and there is quite as much in the way of protective forests, brush-lots, etc. One thing we do not have at Charles City which is notable at Osage, and that is the high limestone cliffs which line the one side of the Cedar near Osage vicinity. Of course such cliffs furnish a great windbreak against the cold winter gales. It may be that the shelter of such has led the cardinal to continue with greater numbers in that region, whereas he has passed by our territory, or remained in very scattered detachments.

The future of the cardinal in the middle-northern portion of our state is most interesting. I am on the Red Bird's trail and shall welcome with great fervor the establishment of our locality as a home within the limit of the cardinal's northern range.

OBSERVATIONS ON THE HABITS OF SOME BREEDING BIRDS OF CHATHAM COUNTY, GEORGIA

BY W. J. ERICHSEN

Colinus virginianus virginianus. Bob-white. This species, the only gallinaceous bird that breeds in the county, is moderately common, although it is restricted to certain sections; localities which are apparently suitable being entirely avoided. During the breeding season it is frequently met with in pairs along roadsides traversing open country wherever suitable cover borders them. It is not known to occur on Ossabaw island, one of the largest sea islands on the coast of Georgia, although the character of the country on this island and the mainland is in all respects very similar. It is quite generally and commonly distributed in the cultivated, and open, sparsely timbered districts adjacent to Savannah. Since 1914 I have encountered it in increasing numbers in the heavily forested portions, particularly in the dense undergrowth usually found about the margins of swamps. This apparently is an indication that this species is lately somewhat modifying its habits, since before the year mentioned I knew this bird as strictly an inhabitant of the open country only. While more and more numerously frequenting the forests, it does not appear often to seek nesting sites in them; still restricting itself nearly exclusively to open territory as a breeding environment; ordinarily selecting brushy fields. However, on May 22, 1915, I discovered a nest containing eleven apparently heavily incubated eggs in thickly wooded land bordering a dense swamp. This nest was placed at one end of a large prostrate log, which apparently had long lain there, being nearly completely covered with pine straw, and dead leaves of many species of deciduous trees which grew in profusion nearby. The surrounding undergrowth was mostly myrtle bushes, interspersed with a few very small gum and oak bushes. The nest was situated partially under a large brush pile composed of several bushy dead

oak limbs matted together, and was very effectively concealed. With the exception of the lining, which consisted of dried grasses, this nest was composed of pine straw. The circumstances surrounding the discovery of this nest are peculiar. I was making an effort to flush a Chuck-will's-widow (*Antrostomus carolinensis*) which I suspected was nesting in the vicinity, when I noticed from a distance of about fifty feet a Bob-white (probably the female) running slowly in a circle and trailing her wings on the ground apparently in great distress. A short search revealed the nest, as it was close to the point where I had noted the bird. I was surprised, and somewhat unnerved, on stooping to examine the contents of the nest, to find that a huge King Snake had taken possession and was on the point of beginning its feast.

The Bob-white is not by any means wholly a ground frequenting species. I have repeatedly seen it alight in the high branches of tall trees, but that it does so for purposes of feeding I have been unable to determine. I do not believe, however, that such is the case, since I have never observed it feeding elsewhere than upon or very close to the ground. It is exceedingly valuable as a destroyer of the boll weevil and other destructive insects. The coveys begin to break up about the middle of April, and by the first of May Bob-whites are to be seen only in pairs, and their calling and answering notes can be heard throughout the day from many sections of their haunts. Nest building commences sometimes as early as the latter part of April. My earliest breeding record is May 14, 1916, when I examined a nest containing fourteen fresh eggs, this being also the largest number that I have observed in a nest. As far as my observations go an egg is laid daily, and incubation does not commence until the complement is finished. Throughout the long trying period of incubation the male remains nearby, cheering his mate with his one and two syllabled whistling note. My many attempts to observe and study a brood of young Bob-whites has resulted in failure

each time. Occasionally I have surprised a mother leading her brood across a country road, but upon entering the cover, the tiny creatures disappear among the dead leaves and grasses, becoming seemingly a part of the vegetation among which they hide. It has been stated by several authorities that in the south this species raises two broods, but this information has evidently not been gained from first hand observation, for, unless some mishap occurs to the first clutch of eggs, no more will be laid that season. The Bob-white is an adept at hiding, and unless too closely pressed, will always seek to escape by running through the dense grass and underbrush, which it does with great rapidity.

Chæmepelia passerina passerina. Ground Dove. A characteristic bird of the Lower Austral zone, this species, while formerly abundant, is now quite uncommon. Its decrease during the past five years has been rapid and the few that now breed are restricted to three or four widely separated localities. From 1910 to 1913 I noted it in considerable numbers throughout the county. The cause of its rather sudden decrease is not apparent; the elements cannot be considered as a contributing factor, at least not to the extent of bringing about its almost complete extermination, since this bird can easily sustain itself through protracted periods of intense cold, which, however, rarely occur in this latitude. The winter of 1917-18 was the most severe within the memory of the oldest inhabitants of Savannah, but even before this the Ground Dove had already decreased to the point of almost total disappearance. To the agency of destruction by man, either, cannot be attributed it's decline from an abundant species to one now decidedly uncommon, as it is not considered good eating. Neither can the conversion of its haunts to agricultural uses be a cause of its present scarcity, since it frequents and breeds in country of widely varied character; including cultivated fields, where it often breeds, invariably placing its nest on the "hills" among the growing vegetables.

During the period when it was abundant and generally dispersed in the county, I had many opportunities to observe its habits, and while it was to be met with in equal abundance in country of greatly diverse character, its preferred haunts were sparsely timbered woodland containing low and dense undergrowth. On every excursion into such localities I always met with it in great abundance, and its interesting and confiding ways so greatly endeared it to me that I have viewed its gradual disappearance with sorrow and regret.

In its choice of nesting sites, it exhibits a very wide range. It most frequently selects a low bush, either thinly or densely foliaged. Other situations in which I have found nests include the top of a low stump; high up on a horizontal limb of a large pine, and frequently, upon the ground. An instance of its nesting on the ocean beach came under my observation on May 13, 1915, on Ossabaw island. In this case there was no attempt at nest building, the eggs being deposited in a slight depression in the sand; and when breeding on the ground in woodland or cultivated fields, little or no material is assembled. In fact, nest building occupies little of the time and attention of this species, as when placed in trees or bushes the nest is simply a slight affair of a few twigs loosely interlaid. Further evidence of this bird's disinclination to build a nest for the reception of its eggs is found in the fact that I once found a set in a deserted nest of the Cardinal (*Cardinalis cardinalis cardinalis*). The long nesting period of the Ground Dove is attested by numerous observers, although I have myself never secured eggs earlier than April 15, nor later than June 6; nor have I seen other evidences of early or late nesting. So gentle and confiding are these birds that it is often possible to touch them while on the nest, especially if incubation is advanced. Upon dropping off the nest they always simulate lameness, dragging themselves over the ground with drooping wings in an effort to draw the intruder away. I am of the opinion that

they remain mated for life, since they are observed throughout the year most frequently in pairs.

During the past four years I have been unable to locate a single nest of this species, so uncommon has it become. The last nest noted by me was on June 6, 1916, containing two incubated eggs. It was placed among the terminal twigs of a horizontal limb of a large pine, at a height of seven and a half feet. It used to be a common and familiar bird in the rural settlements, nesting in the shade trees and shrubbery about farm houses. Its rather mournful note could be heard throughout the breeding season, and many pairs could be seen fearlessly walking in the roadways and narrow paths, never flying and seldom even more than moving to one side as a person passed by. This species is non-migratory, passing its entire life in or very near the locality at which it was hatched. So attached to certain localities does it become that even if the undergrowth is cleared and the land cultivated the bird remains, nesting on the ground among the vegetables.

Colaptes auratus auratus. Flicker. Wherever there are areas of cut-over lands on which remain an abundance of dead trees this species will be found in large numbers. At all seasons it exhibits a preference for open pine barrens, but, particularly during the breeding season, is occasionally met with about the edges of swamps if they contain suitable nesting sites. It is abundant on all of the wooded islands, particularly Ossabaw island, where I observed it in large numbers in May, 1915. Here it is oftenest seen in the woods close to the salt marsh or adjoining the beach, apparently not frequenting in any numbers the more heavily forested interior of the island. It prefers tall dead palmetto trees in which to breed and all along the margin of the island can be seen numerous holes which this woodpecker had excavated.

The tendency — too well known to receive more than passing notice here — of this species to continue laying eggs if they are taken has been often noted by me, although

the number of eggs that are laid by a pair in a season if continually robbed is much smaller than more northern breeding Flickers have been known to deposit. In 1915 I secured some data concerning this habit. On May 6, I found a nest in a dead pine at a height of ten feet, containing six fresh eggs, which I took. On May 30 it contained five eggs which I also collected, and a third set, consisting of five, was completed on June 20. At this point, however, the birds deserted the nesting hole and excavated a new one nearby which was inaccessible. The hole from which these eggs were taken was deepened before each new set was deposited. Upon collecting the second set an increased depth of 2½ inches was noted, while the birds removed an inch and a half of wood before depositing the third set. After this last excavation the hole measured twenty-two inches in depth. On April 29, 1916, I found a nest containing five slightly incubated eggs. This is my earliest breeding record. The hole was eight feet high in an oak stump. I have found nests as low as five feet, but this species usually excavates far up and in dead trees on the verge of collapse. According to my observations the Flicker breeds very irregularly. I have noted incubated eggs on April 29, and have seen birds excavating, late in May, what I considered their first hole of the season.

In approaching an occupied nest, if it is close to the ground, the sitting bird always leaves the hole before the observer arrives closer than fifty or seventy-five feet from the nesting tree. If the hole is high up, however, the bird remains in it, often not leaving until the trunk of the tree is rapped upon several times.

This species secures much of its food upon the ground. In crossing any tract of cut-over land upon which has been left numerous limbs and rotten trunks it is not unusual to note a number of Flickers feeding among the brushwood, industriously chiseling out large chunks of rotten wood in their search for insects. When disturbed they generally fly quite a distance off and alight high up on some tree.

A nest-full of half grown Flickers is indeed an interesting, if noisy, crowd of youngsters. I can recall to mind no other bird voice that sounds more like the hissing of a large snake. It is doubtful, however, whether this sound is produced by the young birds in order to frighten their enemies; indeed my observations convince me that this is not the motive that prompts the uttering of this peculiar note, since it is not only given when the young are disturbed by a person, but is uttered whenever the parents return to the nest with food. The young remain in the nest about sixteen days, at the end of which period the five or six full grown birds fill the nesting hole to overflowing. They are very ravenous, requiring a great amount of food daily, both parents working unceasingly during the daylight hours to supply the demand for sustenance. During the first few days of life out of the nest the young remain entirely upon the ground, feeding largely upon ants. They soon become strong upon the wing, however, and as winter approaches, they, together with the parents, can be observed high up among the branches of berry-bearing trees, feeding upon the fruit. In this latitude insects do not entirely disappear in winter, but the Flicker's diet is chiefly vegetable during that season.

REVIEW OF "MIGRATION RECORDS FOR KANSAS BIRDS":

(Wilson Bull., 1918, Dec. 1919, March and June.)

I have read and re-read the series of articles bearing the above title: published by the instructress in Zoölogy of the Kansas State University. Having resided in northeastern Kansas for fifteen years, I am naturally much interested in the *ornis* of the entire state. Many of the records in the article cited above, being so greatly variant from the results of my own observations and records, and some of them so manifestly misleading, I feel that one should, in the interests of exact ornithological records,

make running comment on many of the species and subspecies variously accredited to the state.

In so doing I wish to express my conviction that many of the statements made in the article I criticize are far too sweeping. What is asserted may be true of isolated portions of Kansas: it is most certainly *not* true of *some* portions of Kansas.

Again, one fails to see how one can say,—"No records"; and yet make broad statements regarding occurrence, and manner of occurrence.

7. *Gavia immer*—Loon.

Truly, a "rare migrant." A single flock (of seven) passing over Blue Rapids, October 30, 1919, is my one record.

59. *Larus franklini*—Franklin Gull.

"A rather common migrant." I should call it a *very* common migrant.

69. (For Foster's Tern, *lege* Forster's.)

74. *Sterna antillarum*—Least Tern.

"Intermittantly common summer resident." Qualify by saying, from central Kansas southerly. (One questions the use of the word "resident" in this connection. A "resident" remains the year through. It were better to use the term "habitant.")

131. *Lophodytes cucullatus*—Hooded Merganser.

"Summer resident." This, extremely doubtful.

137. *Marecca americana*—Baldpate.

"Rare summer resident." Occurrence in summer, greatly doubtful.

142. *Spatula clypeata*—Shoveller.

Same characterization; and the same comment, thereat.

144. *Aix sponsa*—Wood Duck.

"Now nearly extinct." This, hardly true, today. The Wood Duck is still fairly abundant, in some regions; and greatly so in preserves. (In Louisiana it still abounds, in a ferial condition.)

149. *Marila affinis*—Lesser Scaup.

(The writer saw a pair of these Ducks at Elmdale in July, 1919. There were no indications, whatever, of their breeding.)

180. *Olor columbianus*—Whistling Swan.

"Winter resident." This, most improbable.

181. *Olor buccinator*—Trumpeter Swan.

"A rare migrant." This species being practically extinct can hardly be truthfully said to be a "migrant," *anywhere*.

203. *Nyctanassa violacea*—Yellow-crowned Night Heron.

"Rare as summer resident." Decidedly so: I have never met with it,—in north, central or southern Kansas.

215. *Coturnicops noveboracensis*—Yellow Rail.

"A rare summer resident." This is absurd, enough. The most southerly breeding record extant is for southern Minnesota; and even that is rather doubtful. (The writer hereof modestly avers that he is an authority on the breedings of this Rail: having studied it for fifteen years, during June, in North Dakota.)

216. *Creciscus jamaicensis*—Black Rail.

The writer once flushed a single Rail of this species from a marsh in Stafford county.

219. *Gallinula galeata*—Florida Gallinule.

(Not listed.) But it has been found breeding in Kansas,—Coffey county,—June, in marshy margin of a lake: nest on a board, at high water. This record now made for the first time by the finder, P. B. Peabody.

221. *Fulica americana*—Coot.

"Common summer resident"—WHERE?

224. *Steganopus tricolor*—Wilson Phalarope.

". . . female should be returning south the middle of July. . . ." This I consider doubtful. Few baby Phalaropes are hatched, on the coulees of North Dakota, before July 20, at the earliest. And since both parents,—quite contradictorily,—join in the care of the young, it is most improbable that the females would desert their charges before the end of July, at the earliest.

225. *Recurvirostra americana*—Avoset: (Advisedly so-called.)

"Rare summer resident." One would like a word of proof of this allegation.

251. *Vetola haemastica*—Hudsonian Godwit.

"Rare migrant." Hardly,—on the whole: I once watched a flock of thirty, or more, in Coffey county, one spring.

(Under, Solitary Sandpiper:—for "full," *lege Fall?*)

258 and 258a. For "Willett" *lege* Willet.

262. *Tryngites subruficollis*—Buff-breasted Sandpiper.

"Rare migrant." Formerly, at least, not so: I used to find flocks, not a few, numbering from five to a dozen, in Coffey county, spring-time, thirty years ago.

278. *Leucopolius*,—(NOT "—pholus"), —*nivosus alexandrinus*—Snowy Plover.

"Rare summer resident, Southwestern Kansas." But,—I found the Snowy Plover *abundant*, in Stafford county, the first of June.

(By the way: the above affords a horrid example of the futility and cumbersome result of an invariant application of the procrustean Law of Priority. Now,—"*Aegialitis nivosa*" was poetic, simple, meaningful, fit. But,—"*Leucopolius*"!—and "*alex-*

andrinus"!—both of them archaic, stilted, and intrinsically unmeaning. The one lovely, specific name,—*nivosus*,—and that, of course, changed for grammatical reasons,—is the one element in the entire concatenation that could afford one scintilla of intelligibleness to the non-classical student.)

305. *Tympanuchus americanus*—Prairie Hen.

"Locally common year-round resident." On the contrary, now growing very rare everywhere.

325. *Catharista urubu*—Black Vulture.

"A common summer resident in Barber and Comanche counties. No Data" (!!!). How, then, do you know that this most-improbable allegation holds good, in fact?
(*urubu*, indeed!)

327. *Elanoides forficatus*—Swallow-tailed Kite.

"Irregular summer resident." If occurring, most-unlikely as a breeder. I once watched a flock of three, in a wide Kansas valley,—as they soared and manoeuvered, with duckling-like "quackings." One of these was brought down from far heights, with a 12-guage shell, winged. To my great sorrow, the specimen could not be located, in the woodland wherein it fell.

331. *Circus hudsonicus*—Marsh Hawk.

"Common resident." *Per contra*, really rare, in northeastern Kansas.

332. *Accipiter velox*—Sharp-shinned Hawk.

"A year-round resident." *Query*. I have never seen one, in Kansas.

337a. *Buteo borealis krideri*—Krider Hawk—(mis-spelled Kreider).

"A visitant." Rather, one should set down this hawk as a rare *breeder* in eastern Kansas. A pair has nested in this county,—Marshall,—for at least two years.

337d. *Buteo b. harlani*—Harlan Hawk.

"Occasional in winter." Who can blame some of us, bird-amateurs, if we feel strongly inclined to discredit the existence of this reputed sub-species? I have often wondered that the attention of savants has never been seriously called, apparently, to the fact that the type-specimen of the "Harlan" Hawk,—which is reputed to breed only in the South-land,—was an autumnal migrant from the North. (This type was taken in Kansas; but I believe that a magnificent bronzy-black adult, bought by me from a Neosho county pot hunter, in November, antedates the type.)

339. *Buteo lineatus*—Red-shouldered Hawk.

"Common resident—in the southern part of the state." I confess I cannot believe this to be true. But, *if* true, will not the

Kansas examples of *lincatus* prove referable to *B. l. texanus?*

360. *Falco sparverius*—Sparrow Hawk.

"Year-round resident." Has the University of Kansas any proof of the wintral occurrence of the Sparrow Hawk, within our borders?

366 and 367. *Asio wilsonianus* and *A. flammeus*—Long-eared and Short-eared Owls.

"Common summer resident (s)." Save in Coffey county the Short-ear I have found extremely rare; while the Long-eared Owl I have never seen, within the state.

368. *Strix varia*—Barred Owl.

"Common resident." Really, very rare, northeasterly.

378. *Speotyto cunicularia hypogaea*—Burrowing Owl.

"Common resident—central and western Kansas." Not uncommon, northeasterly, breeding.

402a. *Sphyrapicus varius nuchalis*—Red-naped Sapsucker.

"A rare migrant." Very doubtful. If so, to any extent, it must be in the extreme western part of the state.

413. *Colaptes cafer collaris*—Red-shafted Flicker.

"A rare resident in eastern Kansas." Not resident, at all; but rather an irregular wintral visitant. May occur, as breeder, in the extreme western portion of Kansas.

417. *Antrostomus vociferus*—Whip-poor-will.

"Common all summer." If so, WHERE? I have never seen nor heard it, in Kansas.

420c. *Chordeiles virginianus sennetti*—Sennett Night Hawk.

"Not uncommon in summer; one record, Lawrence." Patrick Floyd took a typical specimen, thirty years ago, in Coffey county.

466 and 466a. *Empidonaces trailli* and *t. alnorum*—Traill and Alder Flycatchers.

It is extremely doubtful if *trailli* occurs in Kansas. *Alnorum* is the form that occurs (rarely) in Marshall county, in Concordia, and probably Coffey county. (In the latter region, the Alder Flycatcher is common.)

474b. *Otocoris alpestris "pratacola"*—(*legè, praticola*)—Prairie Horned Lark.

474c. *O. a. leucolaema*—Desert Horned Lark.

"Permanent resident, western part of the state." It is of great interest to learn of this fact. I used to find *leucolaema* abundant in northeast Wyoming; mingled, in winter, with Mr. Oberholser's (unaccepted) *enthymia.*

475. *Pica pica hudsonica* (Black-billed) Magpie.

"Rare winter resident." I wish to record, here, the astonishing extension, easterly, of the range of the Magpie into Benson county, North Dakota: Last June, friends observed a specimen,

one afternoon, among the rolling hills beside a wooded lake. Two hours later, we found an old nest in an ash, close to the water's edge.

498c. *Agelaius phœniceus (predatorius)*—Red-winged Blackbird.

". . . remains in winter. . . ." This is very doubtful. In all likelihood, the wintral birds are either *fortis* or *arctolegus:* as the early-spring migrants assuredly are. (Personally, I doubt the occurrence of *fortis.*) Students unaware of the fact will be interested to learn that I have found *arctolegus* breeding commonly in Benson county, North Dakota.

498. *Agelaius p. phœniceus*—"Northeastern" Red-wing.

"Migrant." There is no such bird. The type-Red-wing is found in Florida.

501 and 501.1—*Sturnella magna et neglecta*—Eastern and Western Meadowlarks.

(Neglecta) "replaces the (Eastern) Meadowlark in the western part of the state; not uncommon in eastern Kansas." I find *neglecta* to be the wintral habitant; while, probably, it may nest in eastern Kansas, sporadically.

514a. *Hesperiphona vespertina montana*—Western Evening Grosbeak.

"A rare migrant." No proof of this statement is offered. The Evening Grosbeak of northeastern Wyoming having proven, incredible as it may seem, to be of the type-race, it is unbelievable that Kansas birds can be anything else.

519. *Carpodacus mexicanus frontalis*—House Finch.

"Rare resident." WHERE? If anywhere, must be in the extreme west.

521a. *Loxia curvirostra stricklandi*—Mexican Cross-bill.

"Irregular winter visitants." This, I doubt, greatly. I can find no difference between specimens taken by Patrick Floyd in Coffey county, many years ago, and the large suite taken by myself in Weston county, Wyoming: the latter proving to be *bendirei.* But then,—Dr. Allen once wrote me:—"I can match your Wyoming birds, in both size and character of bill, with birds taken in New England." Truly, then, our *curvirostra* Cross-bills are just a sort of Chinese puzzle, anyhow!

528. *Acanthis linaria*—Red-poll.

"Rare as a winter visitant." I have never seen it. Students will be interested to learn that I found the predominant Red-poll of the Red River Valley to be *exilipes;* and that *rostrata* was sparingly found,—usually in March and April. (*Exilipes* fairly *swarmed,* during February and March; and Mr. Brewster once told me that some of my specimens were "the whitest birds (he had) ever seen, from any region." But I saw one specimen, in high plumage, that was hoary-white, all over.)

529a. *Astragalinus tristis pallidus*—Pale Goldfinch.

". . . . three collected in March . . . and April. . . ." I believe that, in time, this alleged subspecies will be entirely discredited. The above statement seems to me to involve a palpable error: If even an expert cannot differentiate *tristis* and *pallidus*, in the breeding plumage,—UNLESS HE KNOWS WHENCE THE SPECIMENS CAME!,—how can *any one* pronounce on the specific status of birds in the eclipse plumage? (It may not be impertinent to state that I have been trying, for months, to "run to earth" a really typical specimen of *pallidus:* but have failed. A male from Alberta proved to be *tristis!*)

537. *Calcarius pictus*—Smith, (better, Painted), Longspur.

"A common winter sojourner." Thus I found it, in Coffey county, a quarter-century ago. Of late years I have never seen one.

539. *Rhyncophanes mccowni*—McCown Longspur.

"Common in winter in western Kansas." Unquestionably breeds there.

540. *Poœcetes gramineus confinis*—Western Vesper Sparrow.

"Migratory in western Kansas." Undoubtedly breeds there.

546a. *Ammodramus savannarum bimaculatus*—Western Grasshopper Sparrow.

"The Museum records (*bimaculatus*) May 3 to December 3." One naturally infers from this statement that the Western Grasshopper breeds in eastern Kansas. This is counter to all experience: that a type-species and its sub- should both breed in identical localities.

547.—*Passerherbulus henslowi*—Henslow Sparrow.

"Rare summer resident." Fairly common, some seasons, in Marshall county. (Only an expert can identify this sparrow, "in the bush"; and even then only by its laconic note,—"T'sirp,"—or "D'sert").

549.I *Passerherbulus nelsoni*—Nelson Sparrow.

"A rare summer resident." IMPOSSIBLE! I have never found *nelsoni*, in summer, south of Benson county, North Dakota. Had it occurred, in the several regions to the south of that region, where I have been, I should most certainly have recognized it, for its note is unique: just a squeezed-out,—"Kre-e-zhl." (How many younger students know that the Nelson Sparrow absolutely hides its nest: which is the daintiest, most-elaborate sparrow fabric extant, save that of the Le Conte Sparrow,—with which, however, it is quite identical)?

553. *Zonotrichia querula*—Harris Sparrow.

". . . rare winter resident." This is utterly counter to my repeated experience: In both the Kansas regions wherein I have

repeatedly wintered, this great sparrow has been wintrally very common.

554 and 554a. *Z. leucophrys* and *Z. l. gambeli*—White-crowned and Intermediate Sparrows

(Records furnished by the Museum of the Kansas State University seem to be confused and conflicting. Who can differentiate these two, in the field?) It is probable that the White-crown is the prevailing migrant form.

558. *Zonotrichia albicollis*—White-throated Sparrow.

"Common migrant." I found our winsome *albicollis* wintrally common, in Coffey county.

560. *Spizella passerina*—Chipping Sparrow.

"Common in summer." In Marshall county, decided rare, at any time.

563a. *Spizella pusilla arenacca*—Western Field Sparrow.

"Rare: one record." This does not cover the known facts. *Arenacca* has been credibly reported as a migrant, in southwestern Kansas. Even this is misleading. It is confidently to be expected that expert observers will find this bird breeding commonly, clear across western Kansas.

567. *Junco hyemalis*—Slate-colored Junco.

". . . abundant in winter." In Marshall county, *never* common. (Why not hiemalis?)

567f. *Junco h. montanus*—Montana Junco.

"In western Kansas a winter resident." This alleged subspecies, now discredited. The bord referred to is probably *mearnsi:* the Junco which I used to find, now and then, in winter, among the flocks of *aikeni*, in Wyoming.

581j. *Melospiza melodia juddi*—Dakota Song Sparrow.

"Migratory, western Kansas, no record." *Juddi* ought to be found, in migrations, clear across our state. But then,—even experts are not agreed as to the territorial delimitations of this newly-descript race.

588. *Pipilo maculatus arcticus*—Arctic Towhee.

"A winter resident, rare in eastern Kansas." On the contrary, I once found it decidedly common, near Eureka and Eldorado, during the vernal migrations. (How inaccurate to call this bird the "Arctic" Towhee! It is the breeding form, in northeastern Wyoming, where it is much more common than I have ever found the "Common" Towhee anywhere).

596 (not 597)—*Zamelodia melanocephala*—Black-headed Grosbeak.

"Common summer resident. No migration records." This would seem to be a decided error: save that this Grosbeak *may* breed commonly, in far western Kansas.

597a. *Guiraca cærulea lazula*—Western Blue Grospeak.

"In central and western Kansas, common in summer." Quite common, also, in Marshall county.

610. *Piranga rubra*—Summer Tanager.

"In eastern Kansas, common in summer." I found it very rare in Coffey county. Never seen elsewhere.

617. *Stelgidopteryx serripennis*—Rough-winged Swallow.

"Common in summer." Decidedly rare, in the regions known to me.

618. *Bombycilla garrula*—Bohemian Waxwing.

"A rare winter visitant." This is now no longer true. During three winters I have found it at least fairly common; and, during the winter of 1919, decidedly so. (How misleading is "*garrula*": the sole note of this bird is just a wheezy murmur!)

619. *Bombycilla cedrorum*—Cedar Waxwing.

"Year-round resident." I doubt if the Cedar Waxwing is ever regularly habitant, here, in winter.

621, 622a, 622c—*Lanius spp*—Shrikes.

One greatly doubts if *any* Shrike is a "permanent resident." in Kansas. Certainly, there is always a gap between the wintrally-habitant and the breeding, Shrikes. (I confess I have hitherto neglected to secure specimens for the determination of the local breeding form.)

631. *Vireo griscus*—White-eyed Vireo.

It is utterly incredible that any bird so noisy as a Vireo should be "common" anywhere in Kansas; yet never seen, during nearly thirty years, in the counties of Coffey and Marshall.

636. *Mniotilta varia*—Black-and-White Warbler.

"A fairly common summer resident." INCREDIBLE! So far as my own region is concerned, it is found only in the migrations; and even then, very sparingly.

637. *Proto* (not Protho), *notaria citrea*—Prothonotary Warbler.

". . . common . . . wherever swamps are found." Are there really "swamps," in Kansas? I have never seen one. (The name, "Prothonotary," is absurd: even if the beak of this Warbler *is* unique enough to set the bird in a Genus of its own! Why not, as a fitting vulgar name, call this Warbler the "River" Warbler?)

647. *Vermivora peregrina*—Tennessee Warbler.

"Rare migrant." Fairly common, now and then, in Marshall county; and in Topeka.

655. *Dendroica coronata*—Myrtle Warbler.

I can remember when this Warbler really *was* "a common migrant," in Coffey county. It is so no more.

658. *Dendroica cerulea*—Cerulean Warbler.

". . . rare summer resident." Doubtful. We are out of the breeding range of this exquisite creature.

661. *Dendroica striata*—Black-poll Warbler.

"Common migrant." In my region, decidedly uncommon.

674. *Seiurus aurocapillus*—Oven-bird.

"Common summer resident." I have never met it, here.

675 and 676. "Grinnell" and "Louisiana" Water-Thrushes.

One would be utterly disposed to discredit any merely *field* identifications, covering these two races of Water-Thrush. This much, at least, I KNOW: The "Louisiana" Water-Thrush now breeds as far north as Minneapolis, Minn.; while the Water-Thrush of the North reaches that latitude some time between the first and the tenth of August, most years. (Why not eliminate the utterly meaningless "Louisiana" as a designation; and substitute the title, "Southern" Water-Thrush?)

681. *Geothlypis trichas*—Maryland Yellow-throat.

In the matter of the Yellow-throats there seems to me some confusion, in the List sent out by the Kansas State University. We should all bear in mind that Kansas is entirely out of the reputed Breeding Range of the type-species; and that our bird is probably *brachidactyla*. (This last word, of course, should be spelled with a Y,—Brach*y*—).

684 *Wilsonia citrina* (*lege. mitrata*)—Hooded Warbler.

"A rare summer resident." Have never met it. The same is true of the Wilson Warbler.

687. *Septophaga* (*legè "Setophaga"*), *ruticilla*—Redstart.

"In summer a common resident." I have found it breeding but once: 1920.

718. *Thryothorus ludovicianus*—Carolina Wren.

"A common resident." Common, enough, in Coffey county. Some nine specimens seen in Marshall county, these fifteen years.

719c. *Thryomanes bewicki cryptus*—Texas Bewick Wren.

"A common migrant in southwestern Kansas." I found this exquisite singer breeding to a fairly common degree in Barber and Comanche counties.

722. *Nannus hicmalis*—Winter Wren.

"Not uncommon in winter." I have never met it.

735a and 735a. (These, of course, should have been, respectively, 735 and 735a; with the former "Black-capped" and the latter, "Long-tailed," Chickadees.) One of the biological anomalies extant lies in the fact that both the species and the sub-species, named, should occasionally breed, side by side.

757. *Hylocichla aliciæ*—Gray-cheeked Thrush.

758a. *Hylocichla ustulata swainsoni*—Olive-backed Thrush.

These two undoubtedly co-migrate, both spring and autumn; and they pass us in mighty flocks. Though familiar with both, I should not presume to think of trying to differentiate them, in the

field. Utterly familiar with the variant thrush calls, one is yet tantalizingly unable to differentiate the two kinds of birds that utter the sound. It is quite likely that the *swainsoni* Thrushes that migrate through western Kansas are of the now-rejected sub-species, *almae:* which is, some of us are quite sure, a thoroughly good sub-species. Its temperament, its chosen breeding grounds, and its habits are all quite unique. There are several particularly good ornithologists that agree with me, in this contention. 761 and 761a. *Plantesticus* (*legè, Planesticus*).

This review is far and away from having any of the remotest personal animus or bearing. It is, rather, just AN IMPERIOUS DEMAND FOR MORE LIGHT. Past experiences have compelled me, at times, to disavow alleged personal differentiations; and I have hence felt it in no sense uncharitable to view, with skeptical mental attitude, certain differentiations made by others. It is a thousand pities that we might not have, in Kansas, some Nestor like the late Professor Snow, to criticize, formulate and re-tabulate the records made by men less learned or less critical; thus giving the world of Ornithological Science a sound and accurate survey of the *ornis* of Kansas. One also longs for the day when the scientists of this state will bring such concerted stress to bear upon our uncertain State Legislature that they may grant to accredited and genuine bird students the right to take, and to hold in possession specimens of bird-life. There are problems of absorbing interest, with some of us, that can be solved in no other way. The resulting prejudice upon bird life would be quite inappreciable; while the results of the licensing would be of substantial and lasting benefit to the local study of Ornithology.

Throughout, the reviewer has failed to repeat the scientific specific-nomen: as a prop to the proper use of the trinomial system. In this I am sure I should have, were he alive, today, no less a backer than beloved and brilliant Elliott Coues. How he did *hate* tautonomy: and how finely did he voice that hatred!

P. B. PEABODY.

Blue Rapids, Kansas.

ANNUAL MEETING.

The sixth annual meeting of the Wilson Ornithological Club will be held in the lecture room of the Zoölogical Laboratory of the University of Chicago (the Hull Biological Laboratories) on Monday and Tuesday, December 27 and 28, 1920, in connection with the meetings of the American Association for the Advancement of Science. The most of the American Association meetings occur later in the same week, so that there will be few conflicts with our meetings.

While there will be a program of unusual interest and value, there will also be business transacted of great significance to every member of the Club, relating to the future policy of the organization. It is earnestly hoped that the attendance of members at the first business session, which will occur on Monday morning, at 8:30 o'clock, may be large and representative.

Details of the program cannot be given at this early date, but it can be stated that there will be sessions for the reading of papers on Monday afternoon and evening, and on Tuesday morning and afternoon if necessary, to which the general public in invited.

MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION

The meeting of the American Ornithologists' Union in Washington, D. C., November 8-11, 1920, was one of the largest in the history of the Union. One-half of the Fellows and about ten per cent of the entire membership were in attendance. The business meetings on Monday were held at the Cosmos Club and the other sessions at the U. S. National Museum. The election of Fellows and Members included Robert Cushman Murphy of Brooklyn, N. Y., as Fellow; E. C. Stuart Baker and Dr. Percy Lowe of London, Honorary Fellows; 13 Foreign Corresponding Fellows; 5 Members, Ira Noel Gabrielson, Loye Holmes Miller, Aretas Andrews Saunders, Thomas Calderwood Stephens, Myron Harmon Swenk, and 307 Associates. The election of officers for 1921 resulted as follows: President, Dr. Witmer Stone, Philadelphia; vice-president, Dr. George Bird Grinnell and Dr. Jonathan Dwight, New York; secretary, Dr. T. S. Palmer, 1939 Biltmore Street, Washington, D. C.; treasurer, W. L. McAtee, Biological Survey, Washington, D. C. The single vacancy in the Council was filled by the selection of Dr. W. H. Osgood of Chicago and the other six members were re-elected. The program of nearly forty papers, five of which were illustrated by motion pictures, covered a wide range of subjects relating to North American birds.

T. S. PALMER, Secretary.

INDEX TO VOLUME XXXII, 1920

Acanthis exilipes, 144.
linaria, 144.
rostrata, 144.
Accipiter atricapillus, atricapillus, 3.
cooperi, 3, 8, 82, 111.
nisus, 46.
velox, 2, 8, 84, 111, 142.
Acredule caudata vagans, 44.
Actitis macularia, 6, 110.
Aegialitis nivosa, 141.
semipalmata, 7.
Agelaius phœniceus arctolegus, 144.
floridanus, 49.
fortis, 144.
phœniceus, 83, 116, 144.
Aix sponsa, 109, 140.
Alauda arvensis, 45.
Aluco pratincola, 3, 9.
Ammodramus savannarum australis, 50.
bimaculatus, 145.
Anas platyrhynchos, 108.
rubripes rubripes, 108.
Anthus rubescens, 55.
spraguei, 79.
Antrostomus carolinensis, 11, 134.
vociferus vociferus, 11, 84, 114, 143.
Aramus vociferus, 57.
Archilochus colubris, 12, 114.
Ardea herodias, 52.
herodias, 58, 110.
wardi, 58.
Arenaria interpres morinella, 7.
Asio brachyotus, 46.
flammeus, 4, 10, 143.
wilsonianus, 4, 143.
Astragalinus tristis pallidus, 145.
tristis, 50, 83, 117.
Avocet, 141.
Bæolophus bicolor, 57, 82, 94.
Baldpate, 108, 140.
Bartramia longicauda, 6.
Bittern, 62, 109.
Blackbird, Florida Red-winged, 49.
Red-winged, 71, 83, 116, 144.
Rusty, 82, 116.
Bluebill, Greater, 109.
Lesser, 109.
Bluebird, 12-18 inclusive, 57, 70, 82, 94, 121.
Bobolink, 49.
Bob-white, 7, 82, 133, 134.
Bombycilla cedrorum, 52, 78, 119, 147.
garrula, 95, 147.
Bonasa umbellus umbellus, 110.
Botaurus lentiginosus, 62, 109.
Branta canadensis candensis, 83, 109.
Bubo virginianus virginianus, 4, 10, 83, 113.
Bufflehead, 109.
Bunting, Indigo, 51, 71, 84, 118.
Buteo borealis borealis, 3, 8, 84, 111.
harlani, 142.
krideri, 142.
brachyurus, 9.
lineatus alleni, 8.
lineatus, 3, 112, 142.
platypterus, 9.
Butorides virescens virescens, 52, 85.
Calcarius pictus, 145.
Calidris leucophæa, 6.
Campephilus principalis, 10.
Canachites canadensis canace, 110.
Cardinal, 71, 82, 123-132 inclusive, 136.
Florida, 51.
Cardinalis cardinalis cardinalis, 82, 123, 136.
floridanus, 51.
Carduelis elegans, 45.
Carpodacus cassini, 75.
mexicanus frontalis, 76, 144.
purpureus purpureus, 50, 117.
Catbird, 55, 70, 120.
Catharista urubu, 2, 8, 142.
Cathartes aura septentrionalis, 2, 8, 83, 111.

Catoptrophorus semipalmatus inornatus, 6.
semipalmatus, 6.
Centurus carolinus, 11, 82.
Certhia familiaris americana, 44, 121.
familiaris, 56.
Ceryle alcyon alcyon, 10, 113.
Chæmepelia passerina passerina, 8, 135.
Chætura pelagica, 12, 84, 114.
Chaffinch, 45.
Charitonetta albeola, 109.
Chat, Yellow-breasted, 70, 84.
Chelidon urubica, 45.
Chen cærulescens, 83.
Chewink, 118.
Chickadee, 82, 121.
Caroline, 57.
Long-tailed, 70.
Texan, 94.
Chondestes grammacus grammacus, 50, 85.
Chordeiles virginianus chapmani, 11.
senneti, 143.
virginianus, 114.
Chrysomitris spinus, 45.
Chuck-wills-widow, 11, 134.
Circus cyaneus, 46.
hudsonius, 2, 8, 11, 142.
Cinclus cinclus aquaticus, 44.
Cistothorus stellaris, 56.
Clangula clangula americana, 109.
Coccyzus americanus americanus, 10, 85, 113.
erythropthalmus, 84.
Colaptes auratus auratus, 11, 137.
luteus, 11, 82, 114.
cafer collaris, 82, 143.
Colinus virginianus floridanus, 7.
virginianus, 11, 82, 114.
Colymbus auritus, 107.
Compsothlypis americana americana, 52.
Conuropsis carolinensis, 10.
Coot, 47, 110, 141.
Corvus brachyrhynchos brachyrhynchos, 82, 115.
corax principalis, 115.
cornix, 45.
corone, 45.
ossifragus, 49.
Coturnicops noveboracensis, 108, 141.
Cowbird, 49, 71, 83, 116.
Creciscus jamaicensis, 141.
Creeper, Brown, 56, 66, 121.
Tree, 44.
Crossbill, 83.
Bendire, 76.
Mexican, 144.
White-winged, 62.
Crow, 71, 83, 115.
Carrion, 45.
Fish, 49.
Florida, 49.
Hooded, 45.
Cuculus canorus, 46.
Cuckoo, 46.
Black-billed, 84.
Yellow-billed, 10, 71, 85, 86, 113.
Curlew, Hudsonian, 6.
Cyanocitta cristata cristata, 82.
florincola, 48.
Cypselus apus, 46.
Dafila acuta, 83, 109.
Daulius luscinia, 43.
Dendrocopus major, 46.
minor, 46.
Dendroica æstiva æstiva, 53, 120.
castanea, 78.
cærulescens cærulescens, 78.
cerulea, 147.
chrysoparia, 85.
coronata coronata, 54, 84, 147.
discolor, 54.
dominica dominica, 54.
fusca, 54, 78.
magnolia, 54, 78.
palmarum hypochrysea, 54.
palmarum, 54.
striata, 54, 148.
tigrina, 53.
vigorsi vigorsi, 54.
virens, 54, 79, 120.
Dickcissel, 71, 86, 97, 98.
Dipper, 44.

Dolichonyx oryzivorus, 49.
Dove, Ground, 8, 135, 136.
Mourning, 7, 84.
Turtle, 46.
Western Mourning, 71.
Dowitcher, 5.
Long-billed, 5.
Dryobates borealis, 10.
pubescens pubescens, 10.
villosus auduboni, 10.
villosus, 82, 113.
Duck, Black, 106, 108.
Pintail, 83, 109.
Wood, 109, 140.
Dumetella carolinensis, 55, 120.
Eagle, Bald, 3, 9, 112.
Ectopistes migratorius, 7.
Egret, 100.
Elanoides forficatus, 8, 142.
Emberiza citrinella, 45.
Empidonax flaviventris, 48.
minimus, 85, 115.
trailli alnorum, 143.
trailli, 143.
virescens, 48.
Ereunetes mauri, 6, 74.
pusillus, 5.
Erithacus rubecula, 43.
Euphagus carolinus, 82, 116.
Falco columbarius columbarius, 9.
peregrinus anatum, 9.
sparverius pauli, 9.
sparverius, 3, 9, 112, 143.
Finch, Cassin Purple, 75.
House, 76.
Purple, 50, 117.
Firecrest, 43.
Flicker, 11, 137, 138, 139.
Northern, 11, 71, 82, 86, 114.
Red-shafted, 82.
Florida cærulea, 62.
Flycatcher, Acadian, 48.
Crested, 48, 71, 85.
Least, 85, 115.
Olive-sided, 75.
Spotted, 44.
Traill's, 71.
Yellow-bellied, 48.
Fringilla cœlebs, 45.
Fulica americana, 110, 141.
atra, 47.
Gallinago delicata, 5.
Gallinula galeata, 141.
Garrulus glandarius, 45.
Gavia immer, 73, 107, 140.
Gecinus viridis, 46.
Geothlypis trichas ignota, 55.
trichas, 120.
Gnatcatcher, Blue-gray, 55, 70, 71, 83, 94.
Godwit, Hudsonian, 141.
Goldcrest, 43.
Golden-eye, 109.
Goldfinch, 45, 50, 71, 83, 117.
Pale, 145.
Goose, Blue, 83, 86.
Canada, 83, 109.
Goshawk, 3.
Grackle, Boat-tailed, 50.
Bronzed, 83, 116.
Florida, 50.
Grebe, Horned, 106, 107.
Little, 47.
Pied-billed, 106, 107.
Grosbeak, Black-headed, 146.
Blue, 58.
Rose-breasted, 71, 84, 118.
Western Blue, 71, 146.
Grouse, Black, 47.
Ruffed, 110.
Sharp-tailed, 110.
Spruce, 110.
Guiraca cærulea cærulea, 5, 8.
lazuli, 146.
Gull, Bonaparte, 64, 74.
Franklin, 140.
Herring, 47, 107.
Hæmatopus palliatus, 7.
Haliæetus leucocephalus leucocephalus, 3, 9, 112.
Hammer, Yellow, 45.
Harrier, Hen, 46.
Hawk, Broad-winged, 9.
Cooper, 3, 8, 71, 82, 111.
Duck, 9.
Florida Red-shouldered, 9.
Krider, 142.
Little Sparrow, 9.
Harlan, 142.
Marsh, 2, 8, 46, 11, 142.
Pigeon, 2, 9.
Red-shouldered, 3, 112, 142.
Red-tailed, 3, 8, 71, 84, 111.
Sharp-shinned, 2, 8, 84, 111, 142.
Short-tailed, 9.
Sparrow, 3, 9, 46, 112, 143.
Helmitheros vermivorus, 85.
Helodromas solitarius solitarius, 6, 83.
Hen, Prairie, 142.

Heron, Black-crowned Night, 62.
Great Blue, 58, 62, 99, 100, 110.
Green, 62, 71, 85.
Little Blue, 62.
Louisiana, 64.
Yellow-crowned Night, 140.
Hesperiphona vespertina montana, 144.
vespertina, 116.
Hirundo erythrogastra, 52, 84, 119.
rustica, 44.
Hummingbird, Ruby-throated, 12, 71, 114.
Hydranassa tricolor ruficollis, 64.
Hylocichla aliciæ aliciæ, 85.
fuscescens fuscescens, 57.
guttata pallasi, 57, 83, 121.
mustelina, 57.
ustulata swainsoni, 58, 85.
Ibis, White-faced Glossy, 74.
Icteria virens virens, 84.
Icterus galbula, 116.
spurius, 49.
Ictinia mississippiensis, 8.
Iridoprocne bicolor, 52.
Jay, 45.
Blue, 71, 82, 115.
Canada, 115.
Florida Blue, 48.
Junco hyemalis, 146.
hyemalis, 51, 82, 118.
mearnsi, 77.
montanus, 146.
Junco, Montana, 146.
Pink-sided, 77.
Slate-colored, 51, 82, 118, 146.
Killdeer, 7, 71, 110.
Kingfisher, Belted, 10, 71, 86, 113.
Kingbird, 48, 71, 85, 114.
Arkansas, 75.
Cassin, 73, 75.
Gray, 48.
Kinglet, Golden-crowned, 57.
Ruby-crowned, 57, 83, 121.
Kite, Mississippi, 8.
Swallow-tailed, 2, 8, 142.
Lanius ludovicianus ludovicianus, 52.
migrans, 82.
Lanivireo flavifrons, 53.
solitarius solitarius, 53, 83.
Lark, Desert Horned, 143.
Prairie Horned, 59, 143.
Sky, 45.
Larus argentatus, 47, 107.
franklini, 140.
philadelphia, 64, 74.
Leucopolius nivosus alexandrinus, 141.
Limpkin, 57.
Longspur, Chestnut-collared, 76
Mccown's, 76, 145.
Smith's, 145.
Loon, 73, 74, 107.
Lophodytes cucullatus, 108, 140.
Loxia curvirostra bendirei, 76.
stricklandi, 144.
leucoptera, 62.
Magpie, 45, 75, 143.
Mallard, 60, 108.
Mareca americana, 108, 140.
Marila affinis, 109, 140.
marila, 109.
Martin, 45.
Purple, 52, 84, 119.
Meadowlark, 81, 116, 144.
Southern, 49.
Western, 71, 144.
Megaquiscalus major major, 50.
Melanerpes erythrocephalus, 82, 114.
Meleagris gallopavo silvestris, 7.
Melospiza gerogiana, 51.
lincolni lincolni, 83.
melodia melodia, 51, 77, 82, 118.
juddi, 146.
Merganser, 108.
Hooded, 108.
Red-breasted, 108.
Mergus americanus, 108.
serrator, 108.
Microrhamphus griseus griseus, 5.
scolopaceus, 5.
Mimus polyglottos polyglottos, 55.
Mniotilta varia, 53, 83, 119, 147.
Mockingbird, 55, 66.
Molothrus ater ater, 49, 83, 116.
Motacilla alba, 44.

Muscicapa grisola, 44.
Myiarchus crinitus crinitus, 48, 85.
Myiochanes virens, 48, 115.
Nannus hiemalis hiemalis, 56, 59, 60, 148.
Nighthawk, 143.
Florida, 11.
Nightingale, 43.
Nucifraga columbiana, 75, 95.
Numenius aquaticus, 47.
hudsonicus, 6.
Nutcracker, 75, 95.
Nuthatch, 44.
Brown-headed, 57.
Florida White-breasted, 56.
Red-breasted, 82, 86, 121.
White-breasted, 82, 121.
Nuttalornis borealis, 75.
Nyctanassa violacea, 140.
Nyctea nyctea, 4, 113.
Ochthrodromus wilsonius, 7.
Olor buccinator, 140.
columbianus, 57, 140.
Oporornis agilis, 55.
formosus, 55, 85.
Oreospiza clorura, 77.
Oriole, Baltimore, 71, 116.
Orchard, 49, 71.
Osprey, 3, 9, 112.
Otus asio asio, 4, 112.
floridanus, 10.
Oven-bird, 54, 71, 148.
Owl, Barn, 3, 9.
Barred, 4, 111, 143.
Burrowing, 1, 43.
Great Gray, 112.
Great Horned, 1, 4, 10, 71, 83, 113.
Long-eared, 4, 143.
Screech, 4, 112.
Short-eared, 4, 10, 46, 143.
Snowy, 4, 113.
Tawny, 46.
Oxyechus vociferus, 7, 110.
Oystercatcher, 7.
Pandion haliaëtus carolinensis, 3, 9, 112.
Paroquet, Carolina, 11.
Parus cristatus, 44.
major, 44.
Partridge, Common, 46.
Passer domesticus, 45, 58, 117.
Passerculus sandwichensis savanna, 50.
Passerherbulus henslowi henslowi, 50, 145.
occidentalis, 76.
maritimus fisheri, 50.
peninsulæ, 50.
nelsoni nelsoni, 50, 145.
Passerella iliaca iliaca, 82.
Passerina cyanea, 51, 84.
Pediœcetes phasianellus phasianellus, 111.
Pelidna alpina sakhalina, 5.
Penthestes atricapillus, 82, 121.
carolinensis agilis, 94.
carolinensis, 57.
Perisoreus canadensis, 115.
Pewee, Wood, 48, 71, 115.
Phalarope, Wilson's, 141.
Philohela minor, 5.
Phlœotomus pileatus abieticola, 113.
pileatus, 11.
Phœbe, 48, 71, 82, 115.
Pica pica hudsonia, 75, 143.
rustica, 45.
Pigeon, Passenger, 7.
Pintail, 109.
Pipilo erythrophthalmus alleni, 51.
erythrophthalmus, 51, 82, 118.
maculatus arcticus, 146.
Pipit, 55.
Sprague's, 79.
Piranga erythromelas, 78, 84, 118.
ludoviciana, 78, 85.
rubra rubra, 51, 84, 147.
Pisobia maculata, 5.
minutilla, 5.
Planesticus migratorius migratorius, 57, 81, 121.
propinquus, 79.
Plegadis guarauna, 74.
Plover, Black-bellied, 6.
Semipalmated, 7.
Upland, 6.
Snowy, 141.
Wilson's, 7.
Podilymbus podiceps podiceps, 107.
Poœcetes gramineus confinis, 145.
gramineus, 50, 117.

Porzana carolina, 100.
Progne subis subis, 52, 84, 119.
Protonotaria citrea, 53, 147.
Querquedula crecca, 47.
discors, 108.
Quiscalus quiscalus æneus, 83, 116.
aglæus, 50.
Rail, Black, 141.
Sora, 110.
Virginia, 47, 110.
Water, 47.
Yellow, 141.
Rallus aquaticus, 47.
Raven, 116.
Recurvirostra americana, 141.
Redbreast, 43.
Redpoll, 144.
Redstart, 55, 70, 84.
Redwing, 43.
Regulus calendula calendula, 57, 83, 121.
crestatus, 43.
ignicapillus, 43.
satrapa, 57.
Rhynchophanes maccowni, 76, 145.
Riparia riparia, 119.
Robin, 57, 70, 81, 121.
European, 43.
Western, 73, 79.
Sanderling, 6.
Sandpiper, Buff-breasted, 74, 141.
Least, 5.
Pectoral, 5.
Red-backed, 5.
Semipalmated, 5.
Solitary, 6, 83.
Spotted, 6, 71, 110.
Western, 6, 74.
Sapsucker, Red-naped, 73, 74, 143.
Yellow-bellied, 10, 113.
Sayornis phœbe, 48, 82, 115.
Seiurus aurocapillus, 54, 148.
motacilla, 55.
noveboracensis noveboracensis, 55.
Setophaga ruticilla, 84, 148.
Shoveller, 109.
Shrike, Loggerhead, 52.
Migrant, 82.
Sialia sialis sialis, 57, 94.
Siskin, 45, 71.
Sitta cæsia, 44.
canadensis, 83, 121.
atkinsi, 56.
carolinensis carolinensis, 83, 121.
pusilla, 56.
Snipe, Wilson's, 5.
Sora, 110
Sparrow, Chipping, 51, 71, 86, 118, 146.
Clay-colored, 71, 77, 83.
Dakota Song, 146.
English, 2, 3, 58, 117.
Fox, 82.
Grasshopper, 50.
Harris, 77, 83, 143.
Henslow, 50, 79, 145.
Intermediate, 146.
Lincoln, 83.
Lark, 50, 71, 85.
Louisiana Seaside, 50.
Nelson, 50, 66, 145.
Pine-woods, 51.
Savanna, 50.
Scott's Seaside, 50.
Song, 51, 77, 82, 118.
Swamp, 66.
Tree, 82, 117.
Vesper, 50, 117.
Western Field, 71, 146.
Western Grasshopper, 71, 145.
Western Henslow's, 76.
Western Vesper, 145.
White-crowned, 77.
White-throated, 51, 84, 117, 146.
Spatula clypeata, 109, 140, 143.
Speotyto cunicularia hypogæa, 143.
Sphyrapicus varius nuchalis, 75, 143.
varius, 10, 113.
Spiza americana, 86.
Spizella monticola monticola, 82, 117.
passerina passerina, 51, 86, 118, 146.
pallida, 77, 83.
pusilla arenacea, 146.
pusilla, 51, 85.
Steganopus tricolor, 141.
Stelgidopteryx serripennis, 119, 146.

Sterna antillarum antillarum, 65, 140.
caspia, 74.
hirundo, 107.
Strix varia alleni, 10.
varia, 112, 143.
Sturnella magna argutula, 49.
magna, 81, 116, 143.
neglecta, 143.
Swallow, 44.
Bank, 71, 119.
Barn, 44, 45, 52, 71, 84, 119.
Cliff, 52, 71.
Rough-winged, 52, 71, 119, 147.
Tree, 52, 71.
Swan, Trumpeter, 140.
Whistling, 57, 140.
Swift, 46.
Chimney, 12, 71, 84, 117.
Syrnium aluco, 46.
Tachybaptes fluviatilis, 47.
Tanager, Louisiana, 85, 86.
Scarlet, 71, 78, 84, 118.
Summer, 51, 84, 147.
Western, 78.
Teal, Common, 47.
Telmatodytes palustris iliacus, 56.
marianæ, 56.
palustris, 56. 120.
Tern, Black, 108.
Caspian, 74.
Common, 65, 107.
Least, 65, 140.
Roseate, 65.
Tetrao tetrix, 47.
Thrasher, Brown, 56, 71, 83, 120.
Thrush, Gray-cheeked, 70, 85, 148.
Hermit, 57, 83, 86, 121.
Mistle, 43.
Olive-backed, 58, 70, 85, 148.
Wood, 57, 70.
Thryomanes bewickii ariborius, 25, 27.
bairdi, 21.
bewickii, 19, 56.
calophonus, 24, 25, 26, 27.
catalinæ, 23.
cerroënsis, 21.
charienturus, 21.
cryptus, 19, 148.
drymœcus, 23.
eremophilus, 20.
leucophrys, 23.
marinensis, 24.
murinus, 20.
neosophilus, 23.
percnus, 21.
spilurus, 24, 27.
brevicaudus, 28.
insularis, 28.
Thryothorus ludovicianus ludovicianus, 56, 85, 148.
Titmouse, British Long-tailed, 44.
Crested, 44.
Great, 44.
Tufted, 57, 82, 94.
Totanus flavipes, 56.
melanoleucus, 6.
Towhee, 51, 71, 82.
Arctic, 146.
Green-tailed, 73, 77, 78.
White-eyed, 51.
Toxostoma rufum, 56, 83, 120.
Tringa canutus, 5.
Troglodytes aëdon aëdon, 56, 120.
parkmani, 56, 60, 83.
troglodytes, 44.
Tryngites subruficollis, 74, 141.
Turdus iliacus, 43.
merule, 43.
viscivorus, 43.
Turkey, Wild, 7.
Turnstone, Ruddy, 7.
Turtur turtur, 46.
Tympanchus americanus, 152.
Tyrannus dominicus, 48.
tyrannus, 48, 85, 114.
verticalis, 75.
vociferus, 75.
Veery, 57.
Vermivora celata, 53.
peregrina, 147.
pinus, 85.
rubricapilla rubricapilla, 120.
Vetola hæmastica, 141.
Vireo griseus griseus, 53, 147.

Vireo, Bell's, 71.
Blue-headed, 53, 83.
Red-eyed, 53, 71, 119.
Warbling, 53, 71.
White-eyed, 53, 147.
Yellow-throated, 53, 71.
Vireosylva olivacea, 53, 119.
Vulture, Black, 2, 8, 142.
Turkey, 2, 8, 83, 111.
Wagtail, White, 44.
Warbler, Bay-breasted, 79.
Black and White, 53, 71, 83, 119, 147.
Blackburnian, 54, 70, 79.
Black-poll, 54, 70, 148.
Black-throated Blue, 78.
Black-throated Green, 54. 79, 120.
Blue-winged, 85.
Cape May, 53.
Cerulean, 147.
Connecticut, 55.
Canada, 55, 79, 85, 86.
Golden-winged, 85, 86.
Hooded, 55, 148.
Kentucky, 55, 85.
Magnolia, 54, 70, 78.
Myrtle, 54, 70, 84, 147.
Nashville, 120.
Orange-crowned, 53.
Palm, 54.
Parula, 53.
Pine, 54.
Prairie, 54.
Prothonotary, 53, 147.
Tennessee, 70, 147.
Worm-eating, 85, 86.
Yellow, 53, 70, 120.
Yellow Palm, 54.
Yellow-throated, 54.
Water-Thrush, Grinnell's, 70, 148.
Louisiana, 55, 148.
Northern, 55.
Waxwing, Bohemian, 95, 98, 147.
Cedar, 52, 147.
Whippoorwill, 11, 87-93 inclusive, 114.
Willet, 6, 141.
Western, 6.
Wilsonia canadensis, 55, 79, 85.
citrina, 55, 148.
Woodcock, 5.
Woodpecker, Downy, 46, 71, 82, 113.
Green, 46.
Hairy, 46, 71, 82, 113.
Ivory-billed, 10.
Lesser Spotted, 46.
Northern Pileated, 113.
Pileated, 11.
Red-bellied, 10, 82.
Red-cockaded, 10.
Red-headed, 10, 71, 82, 114.
Southern Downy, 10.
Southern Hairy, 10.
Wren, Carolina, 56, 70, 85, 96, 148.
House, 56, 60.
Ling-billed Marsh, 56, 70.
Marian's March, 56.
Prairie Marsh, 56.
Short-billed Marsh, 56.
Texas Bewick's, 148.
Western House, 56, 70, 83.
Winter, 56, 59, 148.
Yellow-legs, 6.
Greater, 6.
Yellow-throat, Florida, 55.
Maryland, 70, 120, 148.
Zamelodia ludoviciana, 84, 118.
melanocephala, 146.
Zenaidura macroura carolinensis, 7, 84.
Zonotrichia albicollis, 51, 84, 117, 146.
leucophrys, 77, 146.
gambeli, 146.
querula, 77, 83, 145.

THE WILSON BULLETIN

VOL. XXXII MARCH, 1920 NO. 1

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

Affiliated with the American Association for the Advancement of Science

No. 110

THIS PERIODICAL IS SENT IN EXCHANGE FOR YOUR PUBLICATIONS BY

OBERLIN COLLEGE LIBRARY

OBERLIN, OHIO, U. S. A.

Exchanges Should be Addressed as Above

CONTENTS

The Raptores of Nelson County, Kentucky	By Ben J. Blincoe	1-4
Notes on Birds of Wakulla County, Florida	By John Williams	5-11
Bluebird Migrations, 1917	By Howard Clark Brown	12-17
A Synopsis of the Genus Thryomanes	By Harry C. Oberholser	18-28
The Annual Meeting		29-31
Membership Roll		32-40

THE WILSON BULLETIN

Published quarterly, March, June, September, December, as the organ of the Wilson Ornithological Club and the Nebraska Ornithological Union, is edited by Dr. Lynds Jones.

Terms:—$1.00 a year, including postage, strictly in advance. Single numbers 30 cents. Free to all members not in arrears for dues.

The Office of Publication is No. 48 South Main st., Oberlin, Ohio. Subscriptions may be addressed to Geo. L. Fordyce, Youngstown, Ohio, Treasurer.

All articles and communications intended for publication and all books and publications for notice, should be sent to Dr. Lynds Jones, Spear Laboratory, Oberlin, Ohio.

The officers of the Wilson Ornithological Club for the year 1920 are:

President—Dr. R. M. Strong, Loyola University, Chicago, Ill.
Vice-President—Dr. H. C. Oberholser, Washington, D. C.
Secretary—Albert F. Ganier, 2507 Ashwood Ave., Nashville, Tenn.
Treasurer—George L. Fordyce, Youngstown, Ohio.
Editor Wilson Bulletin—Lynds Jones, Spear Laboratory, Oberlin, Ohio.

Prices for Separates

For 25 four-page separates, $4.00; eight pages, $9.00; sixteen pages, $10.00. These prices are for separates without covers. Covers will add about $2.00 to these figures. Fifty four-page, $5.00; 50 eight-page, $11.00; 50 sixteen-page, $13.00.

Entered as Second-class Matter, July 13, 1916, at the Post Office at Oberlin, Ohio, under the Act of March 3, 1879.

GIVE IT A FAIR TRIAL

Four Months Trial Subscription for only 25c

The Guide to Nature

Subscription $1.00 a year, Single copy 10c

EDWARD F. BIGELOW, Managing Editor

The Agassiz Association

ArcAdiA: Sound Beach, Conn.

WANTED

The following numbers of the series of the Wilson Bulletin:

37, 46, 54, 65, 94

For good, clean copies of any of these numbers a dollar will be paid.

Address The Wilson Bulletin, Oberlin, Ohio

The "Blue Bird"

Is now published monthly, the year 'round, with new and interesting departments, features and contests, and AT NO ADDITIONAL COST TO SUBSCRIBERS.

Official organ of The Cleveland Bird Lovers' Association.

SEND STAMP FOR SAMPLE COPY

Annual Subscription $1,50 Agents Wanted Everywhere

THE BLUE BIRD

1010 Euclid Ave., Cleveland, Ohio

The Collectors' Journal

An illustrated monthly magazine devoted to collectors of postage stamps. The leading exponent of stamp collecting which no collector can afford to be without.

Subscription Price, 50c per year.

Sample Copy, 5c.

H. L. LINDQUIST, Editor and Publisher

700 East 40th St., Chicago, Ill.

We operate our own printing plant and are in position to do high grade commercial and publication work at moderate prices. Write us about your next job.

BOOKS WANTED

Cash prices desired for any of the following books in good second-hand condition:

Catesby, M.—The Natural History of Carolina, Florida, etc. Any edition.

Kalm, P. Travels into North America, etc. Any English edition.

Pennant, T.—Arctic Zoölogy. Any English edition.

Bartram, W.—Travels Through North and South Carolina, etc. Any English edition.

Barton, B. S.—Fragments of the Natural History of Penna.

Swainson and Richardson—Fauna Boreali-Americana. Complete or Part Second. Birds.

Bairds, S. F.—Review of American Birds, etc.

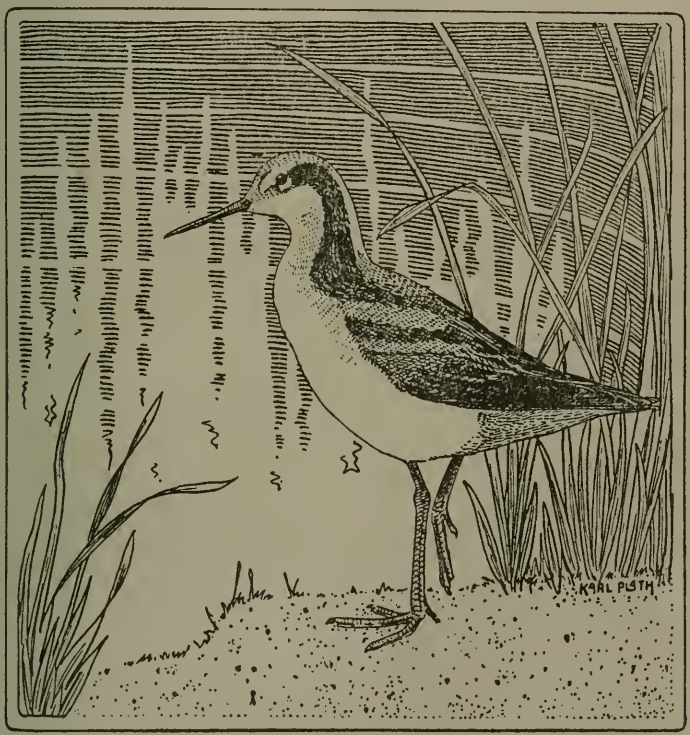
Bairds, S. F.—Distribution and Migration of North American Birds.

Allen, J. A.—On the Mammals and Winter Birds of East Florida.

Baird, Brewer and Ridgway—A History of North American Birds. Water Birds, 2 vols.

JOHN WILLIAMS, St. Marks, Fla.

THE WILSON BULLETIN



VOL. XXXII JUNE, 1920 NO. 2

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

Affiliated with the American Association for the Advancement of Science

No. 111

THIS PERIODICAL IS SENT IN EXCHANGE FOR YOUR PUBLICATIONS BY

OBERLIN COLLEGE LIBRARY

OBERLIN, OHIO, U. S. A.

Exchanges Should be Addressed as Above

CONTENTS

Birds in France and Germany	By Colen Campbell Sanborn	41-47
Birds of Wakulla County, Fla.	By John Williams	48-59
General Notes		59-67
Book Review		68
Nebraska Ornithologists' Union		69-71

THE WILSON BULLETIN

Published quarterly, March, June, September, December, as the organ of the Wilson Ornithological Club and the Nebraska Ornithological Union, is edited by Dr. Lynds Jones.

Terms:—$1.00 a year, including postage, strictly in advance. Single numbers 30 cents. Free to all members not in arrears for dues.

The Office of Publication is No. 48 South Main st., Oberlin, Ohio. Subscriptions may be addressed to Geo. L. Fordyce, Youngstown, Ohio, Treasurer.

All articles and communications intended for publication and all books and publications for notice, should be sent to Dr. Lynds Jones, Spear Laboratory, Oberlin, Ohio.

The officers of the Wilson Ornithological Club for the year 1920 are:

President—Dr. R. M. Strong, Loyola University, Chicago, Ill.
Vice-President—Dr. H. C. Oberholser, Washington, D. C.
Secretary—Albert F. Ganier, 2507 Ashwood Ave., Nashville, Tenn.
Treasurer—George L. Fordyce, Youngstown, Ohio.
Editor Wilson Bulletin—Lynds Jones, Spear Laboratory, Oberlin, Ohio.

Prices for Separates

For 25 four-page separates, $4.00; eight pages, $9.00; sixteen pages, $10.00. These prices are for separates without covers. Covers will add about $2.00 to these figures. Fifty four-page, $5.00; 50 eight-page, $11.00; 50 sixteen-page, $13.00.

Entered as Second-class Matter, July 13, 1916, at the Post Office at Oberlin, Ohio, under the Act of March 3, 1879.

GIVE IT A FAIR TRIAL

Four Months Trial Subscription for only 25c

The Guide to Nature

Subscription $1.00 a year, Single copy 10c

EDWARD F. BIGELOW, Managing Editor

The Agassiz Association

ArcAdiA: Sound Beach, Conn.

WANTED

The following numbers of the series of the Wilson Bulletin:

37, 46, 54, 65, 94

For good, clean copies of any of these numbers a dollar will be paid.

Address The Wilson Bulletin, Oberlin, Ohio

The "Blue Bird"

Is now published monthly, the year 'round, with new and interesting departments, features and contests, and AT NO ADDITIONAL COST TO SUBSCRIBERS.

Official organ of The Cleveland Bird Lovers' Association.

SEND STAMP FOR SAMPLE COPY

Annual Subscription $1,50 Agents Wanted Everywhere

THE BLUE BIRD
1010 Euclid Ave., Cleveland, Ohio

The Collectors' Journal

An illustrated monthly magazine devoted to collectors of postage stamps. The leading exponent of stamp collecting which no collector can afford to be without.

Subscription Price, 50c per year.
Sample Copy, 5c.

H. L. LINDQUIST, Editor and Publisher
700 East 40th St., Chicago, Ill.

We operate our own printing plant and are in position to do high grade commercial and publication work at moderate prices. Write us about your next job.

BOOKS WANTED

Cash prices desired for any of the following books in good second-hand condition:

Catesby, M.—The Natural History of Carolina, Florida, etc. Any edition.

Kalm, P. Travels into North America, etc. Any English edition.

Pennant, T.—Arctic Zoölogy. Any English edition.

Bartram, W.—Travels Through North and South Carolina, etc. Any English edition.

Barton, B. S.—Fragments of the Natural History of Penna.

Swainson and Richardson—Fauna Boreali-Americana. Complete or Part Second. Birds.

Bairds, S. F.—Review of American Birds, etc.

Bairds, S. F.—Distribution and Migration of North American Birds.

Allen, J. A.—On the Mammals and Winter Birds of East Florida.

Baird, Brewer and Ridgway—A History of North American Birds. Water Birds, 2 vols.

JOHN WILLIAMS, St. Marks, Fla.

THE WILSON BULLETIN

VOL. XXXII SEPTEMBER, 1920 NO. 3

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

Affiliated with the American Association for the Advancement of Science

No. 112

THIS PERIODICAL IS SENT IN EXCHANGE FOR YOUR PUBLICATIONS BY

OBERLIN COLLEGE LIBRARY

OBERLIN, OHIO, U. S. A.

Exchanges Should be Addressed as Above

CONTENTS

Nebraska Birds for 1919	By Clarence E. Mickel and Ralph W. Dawson	73-79
Birds of Leavenworth Reservation	By David C. Hilton	80-86
Whippoorwill Calls	By Dayton Stoner	87-93
Birds Near Minco	By Alexander Wetmore	93-94
General Notes		95-100

THE WILSON BULLETIN

Published quarterly, March, June, September, December, as the organ of the Wilson Ornithological Club and the Nebraska Ornithological Union, is edited by Dr. Lynds Jones.

Terms:—$1.00 a year, including postage, strictly in advance. Single numbers 30 cents. Free to all members not in arrears for dues.

The Office of Publication is No. 48 South Main st., Oberlin, Ohio. Subscriptions may be addressed to Geo. L. Fordyce, Youngstown, Ohio, Treasurer.

All articles and communications intended for publication and all books and publications for notice, should be sent to Dr. Lynds Jones, Spear Laboratory, Oberlin, Ohio.

The officers of the Wilson Ornithological Club for the year 1920 are:

President—Dr. R. M. Strong, Loyola University, Chicago, Ill.
Vice-President—Dr. H. C. Oberholser, Washington, D. C.
Secretary—Albert F. Ganier, 2507 Ashwood Ave., Nashville, Tenn.
Treasurer—George L. Fordyce, Youngstown, Ohio.
Editor Wilson Bulletin—Lynds Jones, Spear Laboratory, Oberlin, Ohio.

Prices for Separates

For 25 four-page separates, $4.00; eight pages, $9.00; sixteen pages, $10.00. These prices are for separates without covers. Covers will add about $2.00 to these figures. Fifty four-page, $5.00; 50 eight-page, $11.00; 50 sixteen-page, $13.00.

Entered as Second-class Matter, July 13, 1916, at the Post Office at Oberlin, Ohio, under the Act of March 3, 1879.

GIVE IT A FAIR TRIAL

Four Months Trial Subscription for only 25c

The Guide to Nature

Subscription $1.00 a year, Single copy 10c

EDWARD F. BIGELOW, Managing Editor

The Agassiz Association

ArcAdiA: Sound Beach, Conn.

WANTED

The following numbers of the series of the Wilson Bulletin:

37, 46, 65, 94

For good, clean copies of any of these numbers a dollar will be paid.

Address The Wilson Bulletin, Oberlin, Ohio

The "Blue Bird"

Is now published monthly, the year 'round, with new and interesting departments, features and contests, and AT NO ADDITIONAL COST TO SUBSCRIBERS.

Official organ of The Cleveland Bird Lovers' Association.

SEND 20c FOR SAMPLE COPY

Annual Subscripton $2.00 Agents Wanted Everywhere

THE BLUE BIRD

1010 Euclid Ave., Cleveland, Ohio

The Collectors' Journal

An illustrated monthly magazine devoted to collectors of postage stamps. The leading exponent of stamp collecting which no collector can afford to be without.

Subscription Price, 50c per year.

Sample Copy, 5c.

H. L. LINDQUIST, Editor and Publisher

700 East 40th St., Chicago, Ill.

We operate our own printing plant and are in position to do high grade commercial and publication work at moderate prices. Write us about your next job.

THE WILSON BULLETIN

VOL. XXXII DECEMBER, 1920 NO. 4

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

Affiliated with the American Association for the Advancement of Science

No. 113

THIS PERIODICAL IS SENT IN EXCHANGE FOR YOUR PUBLICATIONS BY

OBERLIN COLLEGE LIBRARY

OBERLIN, OHIO, U. S. A.

Exchanges Should be Addressed as Above

CONTENTS

Bird Notes from Itasca County, Minn.	By Alvin R. Cahn	103-122
The Cardinal in North-Central Iowa	By Howard Clark Brown	123-132
Breeding Birds of Chatham County, Ga.	By W. J. Erichsen	133-139
Migration Records for Kansas Birds	By P. B. Peabody	139-149
Index		151-158

THE WILSON BULLETIN

Published quarterly, March, June, September, December, as the organ of the Wilson Ornithological Club and the Nebraska Ornithological Union, is edited by Dr. Lynds Jones.

Terms:—$1.00 a year, including postage, strictly in advance. Single numbers 30 cents. Free to all members not in arrears for dues.

The Office of Publication is No. 48 South Main st., Oberlin, Ohio. Subscriptions may be addressed to Geo. L. Fordyce, Youngstown, Ohio, Treasurer.

All articles and communications intended for publication and all books and publications for notice, should be sent to Dr. Lynds Jones, Spear Laboratory, Oberlin, Ohio.

The officers of the Wilson Ornithological Club for the year 1920 are:

President—Dr. R. M. Strong, Loyola University, Chicago, Ill.
Vice-President—Dr. H. C. Oberholser, Washington, D. C.
Secretary—Albert F. Ganier, 2507 Ashwood Ave., Nashville, Tenn.
Treasurer—George L. Fordyce, Youngstown, Ohio.
Editor Wilson Bulletin—Lynds Jones, Spear Laboratory, Oberlin, Ohio.

Prices for Separates

For 25 four-page separates, $4.00; eight pages, $9.00; sixteen pages, $10.00. These prices are for separates without covers. Covers will add about $2.00 to these figures. Fifty four-page, $5.00; 50 eight-page, $11.00; 50 sixteen-page, $13.00.

Entered as Second-class Matter, July 13, 1916, at the Post Office at Oberlin, Ohio, under the Act of March 3, 1879.

GIVE IT A FAIR TRIAL

Four Months Trial Subscription for only 25c

The Guide to Nature

Subscription $1.00 a year, Single copy 10c

EDWARD F. BIGELOW, Managing Editor

The Agassiz Association

ArcAdiA: Sound Beach, Conn.

WANTED

The following numbers of the series of the Wilson Bulletin:

37, 46, 65, 94

For good, clean copies of any of these numbers a dollar will be paid.

Address The Wilson Bulletin, Oberlin, Ohio

The "Blue Bird"

Is now published monthly, the year 'round, with new and interesting departments, features and contests, and AT NO ADDITIONAL COST TO SUBSCRIBERS.

Official organ of The Cleveland Bird Lovers' Association.

SEND 20c FOR SAMPLE COPY

Annual Subscripton $2.00 Agents Wanted Everywhere

THE BLUE BIRD

1010 Euclid Ave., Cleveland, Ohio

The Collectors' Journal

An illustrated monthly magazine devoted to collectors of postage stamps. The leading exponent of stamp collecting which no collector can afford to be without.

Subscription Price, 50c per year.

Sample Copy, 5c.

H. L. LINDQUIST, Editor and Publisher

700 East 40th St., Chicago, Ill.

We operate our own printing plant and are in position to do high grade commercial and publication work at moderate prices. Write us about your next job.

AMNH LIBRARY
100108060